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ADVANCED MANAGEMENT

JANUARY 1955 VOLUME XX NO. 1

In This Issue . . .

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by Elisha Gray II

Place And Cost Of Operations Research In Your Company
by Dr. Ellis A. Johnson

Judging The Effectiveness Of Organization
by Alvin Brown

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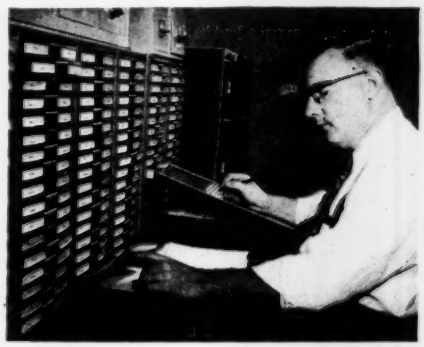

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"Through research, discussion, publication, and other appropriate means to conduct and promote scientific study of the principles governing organized effort in industrial and economic life . . . for the general betterment of society . . ."

SAM Constitution

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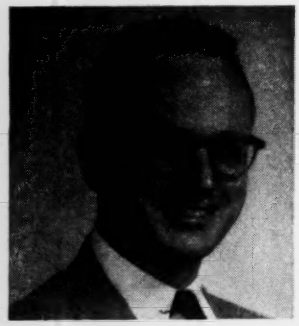

George B. Estes,
President, SAM

Tomorrow's Challenge To The Executive

AS WE look back on 1954 and try to project its swells and currents to the days ahead, one impression stands out above perhaps all others: Management must brace itself for staggering challenges that may descend upon us before we have fully plotted their course and velocity.

The day of so-called automation is no longer a dream. Gauge-control, as distinguished from man-control, has proved dramatically successful in places where its use had been thought impossible.

Nuclear energy in industry is well beyond the drawing-board stage.

Debate on the guaranteed annual wage has grown louder.

The "old house" tradition in manufacturing — the stand-pat philosophy pegged to one product or a very few products — is showing signs of wear as more and more companies, in order to stay competitive, are gearing their equipment and skills for additional products, or else are buying outright other companies with other products.

Consumer economics has not fully shaken off the dust of shooting war; nor can we predict the market pattern when our nation—for the first time in its history—shall have settled into a peacetime economy keyed to instantaneous war. Meanwhile, the buying habits of consumers have grown more and more judicious, and volume spending is markedly conservative despite loosened credit.

These are but a few of the signs warning us that the manager of tomorrow may be asked to perform feats surpassing any task in the history of management—with little or no chance for leisurely planning or laboratory tryouts.

The implications for all executives, seasoned as well as incipient, are clear: Tomorrow's manager will be required—more than ever before, and whether he likes it or not—to be a bit of financier, production man, salary determiner, negotiator, market analyst, salesman, quality control user, purchasing agent, mathematician, psychologist, sociologist, and keen student of national and international affairs. Tomorrow's manager will be forced to be a better developed executive on all fronts, for he will be challenged on all fronts. And management itself will be forced to become better integrated if the challenges of the future are to be met effectively.

The time is upon us when we must relinquish every last vestige of the notion that management is a broad field with compartmentalized, mutually exclusive areas of specialization. There cannot successfully be a controller who is just a controller; a sales manager ignorant of production scheduling; a traffic manager unacquainted with materials handling and warehousing; and so on.

The time is here when we must fully accept the thesis that management is a profession with separate but interrelated and interdependent areas of skill-emphasis. And our executive training must give flesh and blood to this thesis. So must our executives in action. Managerial skill in one area can no longer be effective without the capacity to absorb and use other skills in other areas. This has always been an implied tenet of scientific management.

The executive's success in the days ahead will undoubtedly depend on how well he can meet emergencies by applying scientific management rather than emergency management.

George B. Estes

ELISHA GRAY II began his business career with Sears-Roebuck in Personnel and Store Management, in 1928. He went to the Cutler Shoe Company as Vice President and General Operating Manager in 1933. In 1938 he became Assistant to the President of Whirlpool Corp., and in 1949 he assumed the presidency. He is the grandson of Elisha Gray I, one of the founders of Western Electric Company.

Let's Put People In Our Balance Sheet

by Elisha Gray II
President
Whirlpool Corporation

Can we manage a business entirely on the basis of financial statements? Too many businessmen try. What they need is a broader concept of assets and liabilities than appears in the traditional balance sheet. Perhaps it is time for business to enlarge its accounting to include the values contributed by its people.

IT IS my belief that the business community has fallen into questionable repute in the last 30 years because it has failed to render a full accounting of itself. Our balance sheets have reported only the *financial* responsibilities of the business. They have failed to account for human assets and responsibilities. Today I would like to propose a new balance sheet for American business based upon this belief.

There was a time when private business management exercised decisive responsibilities over the direction of the national economy. Perhaps I can illuminate my meaning by a dramatic illustration which occurred less than fifty years ago, at the time of the panic of 1907. Through swift, bold and imaginative leadership one man largely brought that panic to an end. It was, of course, J. Pierpont Morgan, then undisputed financial arbiter of the land. With the aid of government funds expressly made available to him by the United States Treasury, Morgan operated as a kind of one-man Reconstruction Finance Corporation, bolstering up sagging banks, purchasing industrial securities and generally administering financial relief where it was needed. Because he was the recognized financial leader of his day, he was able to provide the business world with a sense of confidence.

A repetition of this incident today would be inconceivable. For one thing, there is simply no one individual in the present day financial community—or, for that matter, in the industrial community—who can be said to enjoy the power, prestige and strategic position which was held by the elder Morgan. For another thing, in the almost fifty years since 1907—or, to be more precise, in the two decades since 1933 — the center of financial gravity has shifted. Today, only the concentrated power of the federal government, functioning though the federal reserve system and the treasury, could accomplish what J. Pierpont Morgan was able to do as a single individual.

To appreciate fully just how profound has been this shift in the focal point of decisive responsibility for the management of the economy, you need only to recall that, when the first tremors of an economic disturbance began to be felt early in the year, the President of the United States himself announced that all of the vast resources of the Federal Government would be mobilized to arrest any critical economic depression.

In two decades of our lifetime we have witnessed an erosion in the powers exercised by business management even with respect to the direction of the individual business enterprise. We have seen many of the traditional prerogatives of business ownership diluted or sharply curtailed.

Someone once said that the ghost of Senator John Sherman, author of the Sherman Anti-trust Law, is the unseen member of every board of directors. It might also be said that the spirit of the late Senator Robert Wagner hovers at the side of every company president. Enforced competition and compulsory collective bargaining *are but two* of the vital areas in which the historic prerogatives of management decision have been largely superseded by government and by labor.

My point is simply this: The great areas over which business management formerly exercised decisive responsibility have shrunken.

I believe it was the failure of the captains of industry to render a due accounting of the human and ethical

values that carried us into the agonizing thirties. When business, as one function of our society operating in a fundamentally rich country, failed to provide a measure of security and plenty the people at the ballot box set in motion the counter-balancing force of government which in turn set up the powerful voice of labor.

Free Enterprise Advertising Campaign A Failure

For the past twenty years these two, big government and big labor, have taken the center of the stage while the businessman has been figuratively pushed into the wings.

During recent years a prodigous amount of money, time and energy has been expended by business management in an effort to "sell" the "free enterprise system" to the public and to the employees of business.

Now if ever there was a colossal failure it has been this "free enterprise" campaign. After two years of research to determine its effectiveness, the editors of *Fortune* Magazine were constrained to ask: *Is anybody listening?* And the answer is plain: Nobody is listening.

Not only is much of the institutional type of "free enterprise" advertising an insult to the intelligence, but the basic premises of the program are fallacious. The approach has been negative; the language has been defensive; the "facts" have been grossly over-simplified.

Unwillingness to accept the facts of life is a perennial infirmity of the human race. And, will you indulge me if I ironically observe that many of the social and economic benefits for which business is now pumping its own hand were achieved only over the bitter opposition of those who now take credit for the wisdom of their hindsight.

You may recall that businessmen waged a bitter fight against such an elementary idea as workmen's compensation. That happened before most of us here were actively running businesses, and I am sure you were just as surprised as I to learn what a grim fight it was.

About the time I learned about these reactionary predecessors of mine I myself was mentally opposing the advent of social security and a little later unemployment compensation. These two social advances, and a host of others, are now accomplished facts.

My first reaction was that they were "welfare state" cure-alls that made the businessman pay something that the individual should be saving for himself. I thought it was being gouged by a group of people who could outvote me at the polls. Perhaps some of you had this same initial reaction.

Of course it is no such thing. The cost of these social changes is now regarded as a cost of doing business and is included along with the rent and heat, light and power, etc., to determine the selling price of your product. Everyone bears an equal load in this respect. What we actually have, then, is an economy which is adding 19.2% to its wage bill and salting it away as a cushion against a rainy day, or old age or other adversity, and for other social benefits. This economy can afford it, as has been amply proven.

Whatever minor or local abuses of these plans that might annoy you (as they do me) I don't think any of us would now try to cut them out. You can't argue with a social and economic movement that has bettered the lives of the vast majority of people.

I don't think there is a man who seriously believes that we are going to discard social security or workmen's compensation, the S.E.C. or the Sherman and Clayton anti-monopoly laws. Or collective bargaining or the N.L.R.B. or a host of other concepts that have developed in the last twenty-five years. These are things that the people have decided would produce the greatest good from our economic and political system. While each of us may rebel at some detail, most of us will agree that these things have not led the businessman down the road to serfdom. On the contrary, he is emerging today in a more favorable light than ever before, and the *need* for his talents in this balanced economy is generally better realized now than ever.

Reaction To Big Government And Big Labor

In the 1930's the people of this country demonstrated clearly enough that they expected more of the corporate form of business than it had delivered. By their vote they set in motion two counterbalancing forces—big government and big labor.

These two forces have had a field day since 1933. But just as rugged individual business overplayed its hand in the era that came before, so too did government and labor overplay their hands. A compensating corrective phase was the inevitable result.

As a part of this corrective phase, the effort is being made to de-emphasize the role of the federal government as the beginning and end of all good things. The people have recognized that you can carry a good thing too far.

As businessmen I think we now have a setting for a realization of our greatest potentials as a constructive segment of American life. The wheel has run its full cycle.

To you who would challenge my suggestion that the current situation represents a normal balance and who look back at the 1920's as the "good old days," I have this admonition: "Don't confuse nostalgia with normalcy."

Let's Value The Human Element

If you are with me up to here, we are ready to consider how we next move to make the most of the swing of the pendulum. It seems perfectly clear that, to take what I like to consider our rightful position of leadership, we must lead —and in a direction that is compatible with the pulse of the times. It seems evident to me that the balancing forces which have been active since 1930 have all been trying to say to us businessmen one thing: That we were placing the value of the dollar above the value of the human elements in our business; and that in this tremendously vigorous nation of ours there was ample room for both.

You can't very well argue that there isn't *enough for all* when you pause to realize that last year there was over 250 billion dollars of disposable income in this country; we set aside about 9.6 billion dollars for security and insurance of all kinds for our employees, and at the same time we racked up 18.3 billion in profits for our stockholders. Of course there is enough for all.

I beg of you, let us heed the lessons and the meaning of the past two decades. Let us acknowledge that in addition to the ordinary assets which we list on our balance sheet such as cash, accounts receivable, inventory, etc., we truly *have* other unlisted assets which contribute greatly to our business success. And just as today's corporate balance sheet fails to list these assets, so does it ignore the matching liabilities or responsibilities, if you please.

I mean this.

It is surely an asset to your business to be able to operate in a well-balanced community. Well-balanced physically, socially, educationally, and in its government. We all take that for granted, but if we would list it as an asset we would see more clearly that business has a liability or obligation that it must acknowledge if it is to continue to use the asset. Business has to contribute its full share of the effort and money that these assets demand, and if we businessmen think we are entitled to a leading role in our society today, then our share of this contribution of effort and money must be the leading one.

In addition to these assets, which I call social or community ones, there is another that should transcend the entire list. I mean, of course, the people of the business. To read today's corporate reports one might think the outfits were run by machines alone.

Can't we businessmen rediscover that adsurdly obvious truth that workers are *people* not holes punched in an IBM card?

And if we will list these people as our greatest asset perhaps we will then give more thought and sympathy to the offsetting liabilities.

What business management must learn is nothing less than some of the oldest truths of living: The inherent dignity of the individual; man's instinct to be part of a group in which he can have genuine pride; his desire to be recognized.

Pride-In-Work Still A Big Feature

Perhaps this is just another way of saying that there are some things which a pay check simply won't buy.

It is as profoundly true today as it was over a thousand years ago when it was first written: *Man Doth Not Live By Bread Alone.*

It's true that you can buy a man's time. It's true that you can buy a man's physical presence on the assembly line or behind a desk.

But you can't buy the devotion of a man's heart for his job. You can't buy a man's loyalty to the company for which he works.

No pay check will ever buy these intangibles of the human spirit. To exist, they must first be earned.

Important as they are to the fulfillment of a sense of job security and the well-being of the employee, group insurance, hospitalization privileges, retirement pensions, incentive bonuses, paid vacations—all of the so-called fringe benefits with which modern industry has made of its own operations a miniature welfare state—these things are just not good enough if the company itself is unable to give the individual a sense of pride in belonging to its organization.

A business corporation is like an army. When the individual soldier has a sense of pride in his organization, his morale is high. Paid mercenaries may be tough soldiers. But in all history they have never proved themselves to be great soldiers. No war was ever won with pay checks alone. An army fights on its pride; its has to believe in something; it has to have confidence in, and respect for, its officers.

Like an army, this sense of pride in a company, its feeling of confidence in and respect for a company's management, has to begin at the top and seep down. It starts with the company president. On his actions, on the business standards and ethics which he imposes upon himself, the example which he sets for his associates, rests the solid foundation for this sense of pride.

Actions Speak Louder Than Words

Far more convincing than all of the house organs, bulletins, employee magazines and factory communications with which we inundate our employees, is the example set by the company officers and executives themselves.

Make no mistake about it: Even if the company's president is apt to be more myth than reality to his employees, the rank-and-file worker can spot a phony at the top as quickly as you or I.

If the man on the assembly line knows that the product going out of his factory does not represent the best in engineering; if he knows that the quality of the product is shoddy; if he knows that the company's advertising of its product is deceptive; how can you expect him to have any pride in his company? And what incentive does he have to perform his job in a craftsmanlike manner?

By the same token, in those companies where day-to-day actions by management speak louder than words, and where the employees do have confidence in and respect for the sincerity of their management, in those companies the *techniques of communication* will occupy very little of management's time.

I have been endeavoring to say only this: Effective employee relations, like charity, begins at home—in the office of a company's executives. What I have been suggesting perhaps boils down to this simple proposition: Pride in being part of a company; loyalty to a company; devotion for the job—these things can be earned, depending upon what management does. Not management in the abstract. Not what some so-called spokesman for business declares at an annual convention to be the policy of "American Business." Rather, it is how you and I cultivate our *own* gardens; what you and I do in our day-to-day actions in our *own* business. There, as I see it, lies the solution to obtaining the confidence, the respect and the trust of our employees. Only in this way, as I see it, is it possible to create a sense of pride in belonging to a business organization.

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Plainly, what I have been urging is not something which you can neglect four days of the week and practice on the fifth. Nor can this responsibility be delegated to the public relations department or to a "vice president in charge of good citizenship." It has to be a living part of the conscious awareness of *all* who constitute the management group: They have to feel it in their bones. Their reactions to the day-to-day opportunities have to be almost instinctive. It's like the habit of good manners: You don't consciously think about the normal courtesies and amenities of civilized behavior; the practice is largely an automatic reflex.

Now, I'm not advocating some patronizing, paternalistic, do-gooder, turn-the-other-cheek, approach to running a business. History is *full* of failures of such attempts. You've got to have discipline. You've got to have purpose. You've got to have strict standards of performance and everlasting vigilance in any successful enterprise. And you have to be solvent to be useful to anyone, owner or employee.

But I would like to propose that we start measuring the overall performance of a business with a broader set of bench marks than today's corporate balance sheet. The Wall Street Journal recently printed a summary financial report of some dozen companies, all in complete concert with the S.E.C. regulations. These, without exception, were expressed in multiples of a dollar. Occasionally one man's name appears, usually the president's and probably that is because he employs "public relations counsel."

We are asked to score the performance of that company on the basis of dollars alone. It is the only score sheet that is kept. And it was the pursuit of a good score in *dollars* alone that led us to the agonizing years that we have just lived down.

Let's construct a balance sheet that the country at large has been trying to tell us it expects of business. Let's consider dollars as only one ingredient in this formula. Essential? Yes! But *meaningless* without the supporting factors. What good is a dollar profit if to score it you failed to reinvest the necessary dollars in engineering for future growth? What good is your dollar profit if you took it out of depreciation that should have been reinvested to keep your plant up to date? What good was your dollar profit if that year you didn't spend dollars to train new men who could grow to positions of command in your company and insure its continuing vigor?

We Need A Broader Base For Measuring Profit

Your community looks to your business for its support on charitable works (there are few rich people nowadays to finance these things). Was the profit realized by *not* contributing to charities at home? I hope you permit, and in fact *urge* your good men to do their stint in local affairs, giving their priceless leadership to community progress.

And finally, how are your employees doing *personally?* I just don't think there is any sense to a successful company unless the *people* in it are successful *personally*. I mean all the people—the clerks, the vice presidents, the maintenance men; everybody, each in his own measure.

The people of this country expect all these things from business, and that is as it should be. I think if we businessmen change our concept of what constitutes a profit, and score ourselves on a broader base—the human base, if you please—I think we will command the respect and support of every segment of the American people.

Up to now, in evaluating the performance of a company we have used only a financial accounting. I suggest we encourage a *public* accounting by all businesses on the additional values of a company's citizenship, its reinvestment of its earnings for future growth and, most importantly, its success in the handling of the human factors which, in the last analysis, are its very bone and sinew.

While ours is the knowledge that freedom belongs only to the strong, it behooves us to remember, as we continue to maintain our material and technological strength, that all of our hopes and all of our aspirations are ultimately centered upon the individual.

Our greatness as a nation—our effectiveness in world leadership—must continue to rest upon the conviction that it is man's inherent dignity and the enrichment of the human spirit which is the beginning and the end of our democratic endeavors. END

Management And The Worker

Examination of the attitudes and behavior of the employees toward the different supervisors did not reveal a simple, sharp dichotomy between supervisor and employee. Most of the employees looked upon the group chief very much as one of themselves. They did not regard him as possessing much authority and they thought nothing of disobeying him. Although they recognized the section chief as possessing more authority, they did not always obey him either and they frequently argued with him. But toward the assistant foreman their attitude was quite different. They never disobeyed him or argued about his orders. Their behavior when he was in the room was much more restrained than when only the section chief was present. Toward the foreman they were still more apprehensive. They not only obeyed him with alacrity but also when he was present refrained from doing anything that was not strictly according to rules. The difference between their attitude toward the group chief and toward the foreman was well illustrated by the fact that a mild caution from the foreman was regarded as a "bawling out", but the group chief would have had to lecture them very severely before they would have felt they were being "bawled out".

The foreman had little opportunity to find out what the situation was for himself. When he entered the room the behavior of the men underwent a sudden change; they acted as they were supposed to while he was present. The group chief and section chief sided with the men and did not dare to give the foreman an objective account of the facts. It is even doubtful if they could have done so; their own hopes and fears were too much involved. The outcome was that the departmental performance records became distorted and the foreman remained ignorant of much that was going on. There was something in the relation between subordinate and superior which inhibited the free upward passage of facts necessary for intelligent control. From "Management And The Worker" by F. J. Roethlisberger & William J. Dickson.

ELLIS A. JOHNSON, director of Operations Research Office of the Johns Hopkins University, was Research Assistant and Instructor at the Massachusetts Institute of Technology until 1934, when he became Physicist and Section Chairman of Geophysics of the Crust at the Department of Terrestrial Magnetism at Carnegie Institute. He was head of research at the Naval Ordnance Laboratory from 1940 to 1942, then on the staff of CINCPAC from 1942 to 1945, where he formed the first operations research group activated by U. S. forces. He is holder of the Legion of Merit from both the Air Force and the Navy.

Place And Cost Of Operations Research In Your Company

By Dr. Ellis A. Johnson
Director, Operations Research Office
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Operations Research offers industry a new attitude of mind—an attitude that seeks overall optimization of company operation instead of sub-optimization of specific tasks. Can your company use Operations Research? Who should be on your Opsearch team? What will it cost? The discussion of these questions here will help management to understand how to fit Operations Research in with traditional management practices.

I AM concerned specifically with the role and probable cost of operations research groups, in order to provide some data to aid in the formulation of company policy as to how much it might be worthwhile for a company of a particular size to spend on operations research.

I will note four points: (1) that operations research is partly a research approach to existing management professions, to which it can offer some new techniques. As such, it is not basically new, although it is creative and worth while. (2) I believe that the management professions already available can study and help the separate major functions of industry in a very adequate way; for example, industrial engineering for production. Industry does need internal groups to do a better job than the management consultant in the study of the *whole* system of a company and to optimize the performance of that system. Such internal groups with authority for overall systems studies are almost non-existent. (3) The wide variety in attitude, quality and cost of operations research groups should induce a careful investigation and a concerted decision on the part of management before any operations research is purchased, either for external or internal use, and (4) in stable, simple, and stereotyped problems it may be more economical for industry to buy its operations research from outside organizations, but in complicated or dynamic situations an industry may best be served by an internal group although it should buy some of its operations research outside, perhaps as much as 30% on the average.

The two biggest operations research groups, the Rand Corporation and Operations Research Office, are headed by engineers, and at least four of five of the other groups, including those in industry, have engineers at their head. I mention this to emphasize the need to provide practical leadership for operations research groups, even though many of the staff may be skilled theoreticians.

Operations Research already has an excellent record of practice in industry. There are about 1500 Operations Research analysts working for industry now. There are approximately 20 formal groups. Almost every major aircraft company, for example, has a group, and the named groups or departments are growing rapidly. Research work has been done in fields that are similar to, or aspects of, industrial engineering, management consulting, market analysis, finance, and accounting, and covering all kinds of manufacturing, especially in the aircraft industries, agriculture, steel industries, transport—particularly railroads, sea and air transport—merchandising, and some area studies of a broad, general nature.

Many operations analysts believe the methods of Operations Research are exploratory, new, and revolutionary. On the other hand, I think there is no question that many executives and management people ask in an embarrasing way, "Well what *is* new about it?" I believe most Operations Research people, like myself, have a hard time answering that question. There are cogent reasons for arguing that a good deal of what we are doing is old, in the sense that research has previously been done in industrial engineering and management consulting in a sub-optimizing sense; but in modern times there has been far too little research and too much unthinking and repetitive application of old solutions, mostly on small marginal problems. So there is some need of both

more research and of a broader approach.

To industry the examples from military Operations Research are often trite, so far as newness is concerned. There was a management vacuum from the viewpoint of using modern industrial techniques in the military establishment until Operations Research began and filled the "vacuum." To a considerable extent, this was also true in industry in Britain. In these great fields, Operations Research not only developed new and creative techniques, it also rediscovered or adopted well known techniques of American industrial management and labeled these Operations Research.

Operations Research Is A New Kind Of Exploring

When you consider American industry, its productivity per capita, taken at 100 per cent, compares to 50 per cent productivity per capita in Britain and Sweden, to less than 30 per cent in the next best set of countries in Western Europe, and on down to less than 20 per cent. This is evidence of the fact that in the United States the industrial engineering and management consultant fields have been well worked-over. The new techniques Operations Research can contribute in further sub-optimizing the smaller functional parts of industry are probably marginal. The existing slowly developed methods of the industrial engineer has brought us up to this high per capita productivity. It will continue to increase our productivity as new research in industrial engineering is provided and this may well be one of the roles of operations research. If Operations Research brings new techniques through research to existing management professions which can help to continue the existing rate of advance, this should be welcomed by industrial engineers and management consultants.

Operations Research people find the territory well settled. It's settled in the management professions, but that doesn't mean there isn't any exploring to be done. There are different kinds of exploring. This is to bring home the point on the research aspects. If you've done the general exploring—settling—you can still do geodetic work, you can still do geology, you can still come along and do geophysical exploring and map out the magnetic maps of the country, gravity maps and all of the other things that will be of great value to the inhabitants of the country in the scientific but practical ways of finding oil, even though there have been people drilling and finding oil by other methods. I think Operations Research is a new kind of exploring of this nature, but in a "settled" territory. It adds new techniques, new techniques that are of value and that really are genuinely exploratory. It's an extension of the progress we have been making in research and in engineering in this country.

Looked at from this point of view there isn't any mystery; there is nothing magic here. It's the simple extension of the techniques that have been so successful in other parts of our engineering profession. When the nuclear physicists applied their methods to development in the design of nuclear weapons and in nuclear power, they were successful. You can use such techniques; they are straightforward. I think any engineer can learn them if he has a mind to.

I've stressed the point that management professions do exist which take care of the particular major functions of industry. Industrial engineers, for example, seem to me to be largely concerned with man-machine relations in production. In Operations Research language they sub-optimize the performance of the production aspects of a company. If the company knows what it wants to do, that can be—and has been —one of the most potent ways of improving the performance of our industrial society.

Sub-optimizing Results In Poor Balance

On the other hand, there are dangers in that direction. We have found out that there are some parts of our industry that tend to go more and more toward a less progressive situation, so far as relating the overall goods to the sub-optimized or smaller goods. There is a danger of doing what the Navy did when it made the "best" battleships in the world. No question about the fact that when World War II came, we did have the best battleships in the world. They had been sub-optimized to the point where there were no really good competitors, and they weren't very effective or decisive. And, of course, we have the same danger now in this country in the sense that we are sub-optimizing the Strategic Air Command to do the whole job for the nation.

This kind of sub-optimizing must be avoided by industry.

In talking with many industrial executives, it has seemed to me that this sub-optimizing exists too often. I have met industrial engineers who are desperate to help their company in tying together production, inventory and sales, and yet who are not allowed to do so by management because they have been charged by management to do a particular kind of job—that is, optimizing production. The reasons are those of cognizance. Any profession gets charged to do well a particular job, then management tends to want to have it do that and nothing else. Thus, the particular function is separated out and may be poorly tied together to other equally important functions. So, balance is lost.

Full Access To Data Basic To Optimizing

There are good reasons for the attitude of management. Here is its sensitive area. Here are the main secrets of the company, the financial data. It's the place where the full set of information on the company is available and where, for lack of reasonable secrecy and cognizance, control of the company may be endangered. There's a reluctance by most managements of the companies I've looked at to allow anyone full access to the whole set of information one needs in order to optimize production, inventory, sales, and so forth, and to know whether or not the policy of the company is a short-range policy to take advantage of current trends or a long-range, stable policy.

I believe, therefore, that management might do well to reconsider whether or not, in supplement of the management professions that are dealing with sub-optimizing for the major part of the company, it doesn't need trustworthy and highly ethical internal operations research groups to help in this overall optimizing of the whole system. This is increasingly the trend in military groups because it has paid off in practical results.

This job of overall optimizing is the coming area for operations research in industry.

I say to the people who have executive positions that you need to overcome the problems of sensitive information, of secrecy, and of cognizance with respect to company operations, if you want to do this overall optimizing. Perhaps the

operations analysts need to develop a rigid code of ethics which will guarantee their integrity and their effort. If I am right that you can expect only a slow but continued rate of marginal improvement by sub-optimizing—then I will argue that it is also true that you can expect much larger improvements if you "optimize" the whole system.

One of the best examples of this is the work that Thornthwaite did for Seabrook Farms. This is an integrated company operation that grows vegetables, processes them, and sells them. Dr. Thornthwaite solved a labor problem. That labor problem he solved was connected with a peak labor load which brought about labor unrest and, also, a sociological situation in the community. In the process of solving that—which he did successfully—he also reduced the labor cost by 60 per cent. Now, that's not a marginal improvement! And the methods he used were simple. It took about three years to do it, but it did pay off in a very handsome way, handsome enough to put Seabrook well in the black.

I believe that in overall "optimizing" operations research, new research techniques are developed which are best suited for handling new problems and not for applying repetitively old solutions to old problems. I would argue that, in the long run, industrial engineering management consulting and market analysis will adopt anything new that the operations analysts find in the way of new techniques. On the other hand, if the Operations Research people insist primarily on applying, in a repetitive and engineering way, these new techniques found in optimizing the parts of a company, eventually we would not be able to distinguish between operations research and industrial engineering; they will be identical. And it is certainly true that right now there are difficulties because there are a small number of industrial engineers and other management people who do exactly the same kind of research that we do in operations research. I think there is still the need for a research department which may well be the best role for operations research, to do the research that can be applied routinely by the rest of the management profession.

Before I go on, I might say that I do not agree that you cannot use social scientists and engineers in operations research. There are two ways of doing this: You can do this with someone who's been trained in research and learns how to handle operations problems. In very complicated problems it is hard to find the exceptionally gifted individual who has enough definite knowledge to handle the problem above, so you're forced to do it in team research. You are forced to put together teams of specialists who may have as a leader a person who knows the scientific method or the research method well, and who can get the whole team to work together in solving a single, complicated problem. In that respect, we have found that social scientists are every bit as important and useful equally in handling labor problems as the physicist or the mathematician or the statistician. And I would argue that you need, in very complicated problems, cost engineers, accountants, psychologists, sociologists, all of the engineers, as well as a very appreciable number of mathematicians, physicists, and good research types of that sort.

I'm now going to give you some idea of what I think the cost might be in the payoff of industrial operations research. Remember that there is very little practical cost data. I have used what little data is available from industry, and some extrapolated from the military establishment. Remember Army, Navy, and Air Force operations research now is quite different from that during the war. We now work on inventory problems, production problems, and accounting problems. The whole scope of our work is essentially the same as that of industry. It's different from that of war when we were concerned with immediate operations. So, extrapolation may be reasonable.

I have data from a reasonable number of companies which have come to us at the Johns Hopkins University as confidential data. I estimate that if you make an investment in operations research, either by establishing an internal group or in contracted research (if done with care), you can get a payoff that may amount to ten to twenty times your investment, depending upon the situation. There is also some probability of a loss.

The question is: How much can a company afford to spend? For a small company, say of about 500 employees or less, you can afford to expend on the order of one-quarter to one-half of 1 per cent of your gross sales, and if the company is of the order of 10,000 or more employees, you can afford to spend from one-tenth to one-half of 1 per cent of your gross sales. The range of cost per professional man year will be from about $14,000 to $30,000 a year. That's the cost of all overhead, travel, publication, and so forth.

I'm afraid you will not be able to judge the quality of the work by the price. There is not necessarily any correlation. This judgment is taken from experience with ORO's many sub-contractors. It sometimes turns out that some with the lowest cost produce the best work. We have had some very poor payoffs from companies that are very high priced.

I think you can count on an average cost, internally or externally, of roughly $20,000 a research man year.

If you adopt the average figures for the per capita productivity of American industry per man, which is roughly $14,000 a man, you will find that a 500-man business can just about afford a three to five-man Operations Research group, and that a 10,000-man business can afford about a twenty to fifty-man group, plus ten men for every additional 10,000 employees of the company.

The other question that I might dis-

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cuss is how best to operate a group. If the industry is big enough I think it is best to have your own group, but to spend about one-third on outside Operations Research. There is a good reason for that: If you've got a small group, or almost any practical group for any American industry, you'll find that you have to adopt this team technique. You've got to have depth of knowledge as well as general background of knowledge, and if you look into that you'll find that you just can't hire people from enough professions to handle all of the problems that the company brings to them. That is to say, you can't have an expert on everything. You've got to buy some of that knowledge. You won't find all of it in your own company and in your own company experts. Thus, if you get a group which is supposed to handle all the problems you'll find you've got to fit the job to the men. That limits the kind of jobs that can be undertaken many times.

On the other hand, if you're willing to put some of your funds aside to handle the problem of flexibility, then you can fit the men to the job. That gives a lot more flexibility in company operations in handling it by Operations Research techniques. This is just practical advice from a practitioner in the art.

How Big Should The Team Be?

I would argue that the success of a group depends very much on the quality of the research leader, and that the minimum size group should be of the order of five to fifteen, depending upon the quality of that leader. There's no use in getting one or two people, in my opinion. There are many who would disagree with that, but I don't think a successful group can work without some self-stimulus. In fact, I found that fifteen is more nearly the practical limit just because you can't find enough Operations Research trained leaders in this day and age. They will come in time.

Finally, on this general aspect of the problem, I believe that if you have a company which engages in very complicated operations—that is to say, the bigger companies (sometimes, the smaller ones, too, unfortunately)—and in a difficult industry and a dynamic situation of sales, or change in the technology or the market, then you had better not count on much output from a group in much less than three years, because the people doing the work have to get acquainted with the company operations and this takes time. You've got to feed that into their memory banks, and if you try to squeeze something out of them too soon, and expect something too soon under difficult circumstances, you may be very much disappointed.

Leader Sets Pattern For Team Thinking

I might say something about the problem of the diverse attitudes of the people in the Operations Research profession. This is important to executives because if you happen to talk with any particular group that's promoting Operations Research and practicing it, you will find an extremely wide variety of opinion. You will, in fact, find the normal human tendency to specialize in techniques that are familiar to the particular group. If a group gets started with a leader who knows statistics, it's going to tend to emphasize in that direction; if it gets started with someone who's had industrial engineering experience, it'll tend to develop in that direction. If it gets started by someone with a highly theoretical point of view, it will tend to be more theoretical and experimental; and if it starts with someone with an experimental point of view, it will tend to emphasize the empirical aspects.

In the Operations Research Society of America we have not yet worked out all of our differences of opinion. It's a new profession; it is dynamic; it is changing rapidly. We are gradually ironing this out by discussion and controversy in our meetings and publications. I believe this will, in the long run, come out well. But at the same time, if you're executives you ought to recognize that there is no complete meeting of the minds of the operations research people themselves, so far. We haven't yet established fully our professional standards although we're trying hard to do so. So be cautious! You will find that many of the older management groups now have an Operations Research Department. Sometimes this is just a relabeling of something they've been doing for a long time to utilize the prestige of a new name. Just a new name for old wine. In that case, you cannot be quite sure as to what you are buying, whether it is a new or an old vintage which may or may not be just as good. And it may or may not be compatible with some of the standards you will find being established in the Society.

So, use caution when you buy Operations Research. When you buy the attitude of a particular group you ought to explore the several different groups of people who are interested in promoting this new and, I think, dynamic approach.

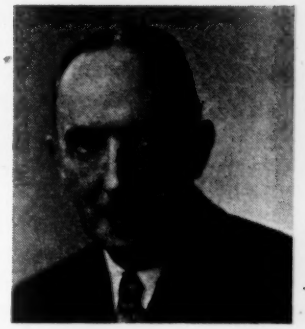
I want to say something about the salaries you might expect to pay to Operations Analysts, if you hire any. You'll find that the salaries are, roughly speaking, about the same as for other research people—say, in the neighborhood of $4,000 to $6,000 for a fresh-caught Ph.D. who wants to practice Operations Research, and so on up. If you just follow the Los Alamos survey on research salaries you will find that to be a reasonable guide.

A New Impetus To Research In Management

If you're looking for a top-flight leader right now, and if you really go after the best in the profession, this is going to come reasonably high for research people. The salaries that I know of (not my own) are in the range from $15,000 to $30,000 a year. You have to gauge by the man and how much he's worth but, again, I suggest that, although there's a real scarcity of top people now, this will not continue indefinitely.

Having said all this, having been a little conservative and cautious, let me say that I believe that Operations Research does provide something very important to industry, primarily a new attitude of mind. It provides a new impetus to research for the management profession, and offers some real possibilities of handling more complicated problems and optimizing the whole system, and this is because the time is ripe. The time is ripe in the United States in the sense that management in general needs and wants this. The engineering and research professions have grown up quite a lot—grown up to the point where they are able to contribute much more. The war had a lot to do with it. We have advanced, and what was not too easy a possibility before the war has become much more so now. We all have participated in that, and what we see here is the normal application of knowledge as we have generated it during the last few years. END

ALVIN BROWN has been Vice President of Finance and a Director of Johns-Manville Corporation since 1946. His career as an authority on business finance and corporate organization and administration began in 1920 with his employment by the Moline Plow Company, later the Moline Implement Company. In 1937 he became Vice President and Assistant to the President of the West Virginia Coal and Coke Corporation. He joined Johns-Manville in 1940 as Assistant to the Vice President in charge of Finance.



Judging The Effectiveness Of Organization

By Alvin Brown
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To control what is happening in a business, management normally checks on results. This usually works out all right when results are easily traced back to their causes. But what do you do when there is no clear-cut cause and effect relation? This is the problem management faces when it tries to appraise its organization.

How to judge whether an enterprise has been effectively organized is not a simple problem. As used here "organization" is a process not a condition. It is the act of defining the responsibilities of the members of an enterprise and the relations among them. Accepting the fact that the skill of organization does affect the results of enterprise, it is tempting to assume that organization can be appraised by observing its effects. This involves two steps. One is to identify the effects with their cause. The other is to judge from those effects the worth of organization.

Appraisal of the results of enterprise presents, of course, no great difficulty. There are many phenomena by which industrial enterprise can be appraised—earnings, profit margins, expense ratios, quality of product, consumer acceptance, growth, and so forth. Such appraisal depends upon comparison with other enterprises. The only difficulty here is with the standard: we can never be entirely sure that the most successful enterprise might not, under other conditions, have been more successful.

Having made this appraisal, however, the real obstacle stands revealed. We know, at least comparatively, what the effects of enterprise have been. But what were the causes that produced them? There we face a veil that scientific method finds difficult to penetrate, and that constrains most people to speculation.

The reason for this difficulty is not hard to find. There are four groups of effective causes in an enterprise. Three of these are more or less controllable. They are people, organization, and the methods of administration.

As used here, "administration" means the endeavor of the members of an enterprise to attain or accomplish its purpose.

External influences, the fourth causal factor, to a considerable extent are uncontrollable. These causes of success or failure (and of course our appraisal usually is applied to the more difficult cases of *relative* success or failure) are seldom separate in their action. They are so bound up in the operation of an enterprise that a particular effect may be due to their united influence, or to the influence of one or more that cannot be distinguished. The predicament is precisely that of the bacteriologist who suspects that one of several bacteria is the cause of a disease but, because he finds them always associated, cannot tell which is the reprobate.

In this predicament, of course the bacteriologist turns to controlled experiment. In industrial enterprise, however, the means of controlled experiment is not apparent and may be nonexistent. One likes to think that some of our very large enterprises, with many widely dispersed activities of a similar nature, might afford a practicable ground for such an experiment, though one must at the same time doubt, even if proper controls could be devised, whether the exigencies of day-by-day activity could be sufficiently interrupted.

Lack of an empirical method does not usually thwart the student in any field, and it is so with organization. When it is impossible to identify the causes of particular effects, there still remains the possibility of reasoning from known causes to probable effects. Thus, there are principles of organization that can be and have been derived from study of the needs of administration, and these principles are a reliable guide to the probable effect of one or another act of organization. The man who doubts the worth of this approach is usually a man who has not thought about principles.

Nevertheless, one cannot fail to sympathize with the wish to trace effects back to their causes, and it is a duty to consider the means by which it may be done, even partially. And when we consider those means we find they are not entirely lacking.

Apart from external influence, there is only a single factor that directly affects the results of enterprise. That factor is the character of administration. This is not to be confused with administrative method. Method is the tool we use, while administration is the way we use it. The character of administration is (apart from externals) the single immediate cause of the results of enterprise. The basic causes—people, organization, and method—all combine to determine the character of administration.

Failure To Act Suspends Enterprise

If, then, we cannot trace the results of enterprise directly to their ultimate causes, we can at least look for causes in the character of administration. After that it may be possible to trace the link to the ultimate cause. At least this approach offers more hope than can any effort to relate the relative success or failure of an enterprise directly to the skill of its organization.

The purpose of this appraisal naturally suggests that we look for the defects of administration rather than its virtues. These defects can be classified in eight groups. Collectively they may be called the pathology of administration. These kinds of defect will be here very briefly described, and their remote causes in organization considered.

1. *Failure to act.* Enterprise implies action, constant action. To suspend action is to suspend enterprise, whether suspension be whole or partial. Thus a failure to act is a serious defect of administration. It happens when a man omits to perform some part of his responsibility, often a continuing omission; and it happens when a man omits for a period to perform his entire responsibility.

Partial omission occurs frequently, as observation easily discloses. A production man will neglect his housekeeping; a salesman will neglect a particular customer or class of customer; an accountant will neglect to reconcile details with his general ledger; the man responsible for making a contract will neglect to get legal advice. The degree to which such failures are prevalent in an enterprise will speak quite eloquently of the character of administration.

A partial omission to act may be due to a variety of organizational defects. Perhaps the first to be suspected is a failure to define the man's responsibility properly so he will understand his duty. It may be, on the other hand, that his responsibility is too great so that he lacks time to perform it completely. The neglected duty may be inconsistent with his major duty—always a temptation to neglect.

These are defects of structure. On the other hand, the failure may spring from defects in the relationships of organization; not understanding the nature of his obligation, the man may think he is free to use his own discretion. Or his supervisor may be neglecting to guide him, either because the supervisor himself lacks understanding of his duty or because he has too much to do. There are other possibilities.

Omission to perform an entire responsibility for a period, if due to organizational cause, reveals that cause much more clearly. This neglect is almost certain to come from failure to understand the need of designating an alternate to act during absences—a failure both of the man himself and of the supervisor who does not repair the neglect.

Human Failure Occurs Even In The Best Organizations

All these organizational causes are possible but none is certain, because many failures to act may be chargeable either to defects of personnel or to an unavoidable obstacle. Organization may be excellent, both in structure and in the understanding of relationships, and because of the defects to which human nature is liable, a man may simply fail to do his duty. Or a particular omission may be something that just could not be helped. Thus, to identify the defect in administration is only to begin the diagnosis. The cure depends on finding the ultimate cause by further study of the enterprise.

2. *Delay in acting.* A second defect in administration is delay in acting, and a serious one it can be. It differs only in degree from failure to act, but it is probably much more prevalent. It is so easy to put things off until tomorrow. One has only to persuade oneself that decisions should not be made hastily. Failures to act are usually the exception, but delay in acting can infect and become characteristic of an entire enterprise. There is some reason to believe this to be one of the disadvantages suffered by an old established enterprise as compared with a young and growing one. It is certainly a defect that must be expected in an enterprise that is "over-organized".

Lack Of Quality A Common Defect

Administration is especially exposed to this defect when organization places its reliance on action by groups or committees, or on any other form of "cooperation" or joint action. Consultation takes time and waits upon common convenience, and no group ever reaches a decision as quickly as one man can. Overlapping responsibilities have much the same effect: each man may wait for the other to act.

On the other hand, delays may be due to ineffective supervision, as when it takes too much time to get decisions from supervisors. Ineffective supervision can, of course, cause most of these defects in administration.

Yet, again the fault may not lie with organization. It can as readily be due to slack personal habits. Who among us has never been guilty of putting off the important thing because it is the troublesome thing?

3. *Wrong actions.* In wrong actions we come to the sin of commission. Doing the wrong thing is often a defect of personnel rather than of organization.

Yet wrong actions can spring from an overload of work that induces hasty decisions, and an overload naturally suggests insufficient delegation of responsibility. Otherwise, they are chargeable to incompetence, which is usually in the area of personnel; but the incompetence may be the result of not specifying a job so that a competent man can be found to fill it.

4. *Lack of quality of effort.* Whether administration maintains a reasonable level of competence may be difficult to detect. What standards are there by which to measure the quality of mental work? For that reason, lack of quality is probably the most common defect of administration.

This defect naturally suggests lack of quality in personnel. Nevertheless, it can also come from any of the organizational causes of inadequate supervision. To

maintain a proper level of performance obviously requires effective supervision. Supervisors who are overburdened or with delegations too numerous or unequal lack the time and the means to see that administration is competent. Lack of quality may also reflect a definition of responsibility that requires too great a diversity of duties and thereby demands too great a diversity of talent.

5. *Lack of quantity of effort.* The work a man does may be of acceptable quality, yet he may not do enough of it. This is a common defect of personnel. It can, however, be induced and abetted by inept organization. The most obvious cause is poor definition of responsibility: not defining a job so as to call forth a man's full capacity. The fault may come also from too many stages of delegation —so great a distribution of responsibility that there is too much supervision (or too much supervisory personnel) in proportion to the actual doing. And, like most other defects, it may be the product of lax supervision. It is, of course, an important part of supervision to see that men produce in the quantity they should.

Men Want To Know What's Expected Of Them

More than other defects in administration the failure to produce may result from poor morale, and poor morale may stem from organizational causes as well as those described as personnel. Most men want to know what is expected of them in their jobs and who expects it. Often, from the man's point of view, it amounts to knowing his rights and rights of others. So if he is told to do too many things that seem inconsistent with his understanding of his duties, and especially if he is told to do them by others than his boss, his interest is likely to flag and his vigor to wane. Indeed, misorganization—and especially an improper conduct of organizational relations—can impair morale in many ways. Lack of quantity of effort is usually the result.

6. *Waste effort.* Things done that do not contribute to the purpose of the enterprise, or that do not contribute sufficiently to be worthwhile, are waste effort. Such waste can come from not defining jobs so that men are not sure of what they should do. It can come from a man's not understanding the limits of his responsibility so that he tries to do work that someone else is doing or should do. And it can come, despite definition and understanding, if supervision fails to restrain those who like to go adventuring in other men's work.

7. *Excessive quantity of effort.* Best recognized of all administrative defects is failure to devise the simplest way of doing things. This also is waste effort, of course, but it is a different kind because it is a way of doing things instead of particular actions. Going through more motions than necessary to accomplish a purpose often has no more remote cause than administrative method itself. Yet the careless organizer can contribute to this defect in a number of ways.

When actions must be taken by groups, or otherwise jointly, the quantity of effort is usually extravagant and the waste of talent is proportionate. Since this sort of action is often at the higher levels of administration it is a waste of the best talent. Overlapping responsibilities have something of the same effect.

Failure to understand and properly practice the relationships between coordinate responsibilities is another cause of excessive effort. When the actions of one department depend upon those of another economy of effort suffers unless both departments understand each other's problems and needs and seek prompt reconciliation whenever there is a hitch in relations.

8. *Excessive quality of effort.* Will anyone ask how excessive quality of effort can be a defect? The answer is that enterprise must expect to pay for effort in proportion to its quality, and if quality is excessive payment will be excessive. In other words, it is a mistake to give a job to a man whose ability exceeds its need. Industry does not use goldplated tools.

Know What Defects To Look For, Then Act

Naturally, this defect can be due to faulty personnel selection, but it is perhaps more likely to be due to faulty definitions of responsibility. If the various duties of a job make a disproportionate demand for skill or experience, the man who fills the job must possess those qualities in proportion to the more exacting duties; his ability will be excessive in relation to his less exacting duties. Much the same result comes if a supervisor delegates any of the more important parts of his responsibility that he could perform himself.

Summary. The character of administration displays the quality of an enterprise. Indeed, the character of administration is the enterprise, in the sense that *le style, c'est l'homme.*

Whether organization has been effective can be judged by applying organizational principle. But if it is to be judged by its effects, they can be found only in the character of administration. A diagnosis of administration naturally deals with its defects, and so it is useful to know what defects to look for and what organizational errors they are most likely to come from.

But it must be remembered that some of these defects can be due directly to administrative method, most of them can reflect defects of personnel, and a few may be due to uncontrollable influences. Some defects, indeed, may be contributed to by more than one of the factors.

After diagnosis of the defects of administration in a particular enterprise it still remains to discover which are traceable to organization. This further study will compare the possible organizational causes, such as are surveyed in this article, with other possible causes. The rest depends on good judgment. END

SAM A Research Publication

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by G. Jay Anyon, Ph. D.

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THE SOCIETY FOR ADVANCEMENT OF MANAGEMENT

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JOSEPH G. GILLAND was born in Scotland, spent four years in a Detroit bank before joining Packard in 1929. He has served that company as Chief Cost Accountant, Chief Accountant of Aircraft Engine Division, Manager of Manufacturing Cost Control Division, and is at present Manager of Cost Estimating Department. He is also President of the Detroit Chapter of the Society for Advancement of Management.

What Does The Foreman Actually Do?

by Joseph G. Gilland
Manager, Cost Estimating Department
Packard Motor Car Company

Much management literature discusses the point of where the foreman stands as to either management or labor. Few articles point out just what he is, or should be. Here is an article that describes the ideal foreman, gives a description of his job, of the man himself and how he can best fill his position in the actual production scheme

THERE WAS A TIME when the foreman was recognized for his knowledge of the work. If he knew how to operate every machine in his department he was rated a superior foreman.

Little thought was given to his ability to lead or understand people. He knew little of the fundamentals of business or of the social service to help employees obtain maximum satisfactions from life.

Today a foreman, in addition to his technical knowledge is expected to get along well with people, treat employees as human beings, foster understanding, enlist participation and cooperation, establish evidence of sincerity, give the workers the economic facts of the job, and encourage individual initiative.

The relationship of top management to the foreman is still undergoing an evolution that corresponds to the constantly changing conditions of our times. Your company and my company is continually improving its products, adjusting its plant facilities for economical production and altering the management structure to obtain a more positive program of planning and control.

The length of service in business for the average individual is not long enough to develop to a high degree an expertness in all of the complex phases and baffling complications of today's large enterprises. The younger men recognize these limitations and are following special skills and appropriate management techniques. As a result—those who aspire to other fields continually reorient their thinking to catch the broader concepts of management approach.

The best way I know to drive home the importance and the magnitude of the job entrusted to the foreman is to look over the high and forbidding walls of the department—and take a look at the individual responsibilities to see if we can find any hidden drama in what is sometimes called a monotonous and humdrum job.

If I am right in viewing the problems of the foreman, (from where I stand) I fail to see a monotony of job. I see a group of men, within certain limits responsible for the creation of a good society and responsible for competent management of a business. Every person who has a directive part in an organization is making a contribution to mankind through responsible business leadership.

Whether it is requested formally or informally, top management is constantly expecting the foreman to improve the efficiency of his operations. They usually abandon all thought of being on the defensive and aggressively insist upon meeting the issues head-on—by testing the productivity of each foreman, by emphasizing responsibility and by plaguing him for lower and lower costs. They keep firing away at the target and even though many of the shots are wild, at least they are pointed in the right direction.

You are the men "at the get-it-done levels." You have an important part to play in operation of your department. It takes planning and it takes the enthusiastic backing of everyone in your group. When you have gained the support of your employees, when they have confidence in your ability to administer sound personnel policies, you can be sure that there is an atmosphere of cooperation and achievement.

Cooperation is not built on just one issue. It is built on the general overall framework of sincerity and integrity on the part of every foreman.

You know, when people have faith in a system they will follow it as long as they have the assurance that the

leaders are right. The basis is faith rather than a formalized set of principles and policies.

I recall an experience in our Motor Assembly Department which served to impress me with the soundness of fair leadership. A young fellow recently assigned to assemble parts to the Motor was having difficulty maintaining the pace established by the Time Study Department. Occasionally, under pressure of the work, he would call for assistance. The foreman was very understanding and patient with the employee. He would say. "It is only a matter of time and the job will take care of itself."

Foreman's Personal Interest Stimulates Cooperation

As time passed there seemed to be no improvement in output. The foreman analyzed the situation carefully and decided to call for a review of the standard. The foreman and the time study observer analyzed each element of the operation together and discovered an error in calculating the standard. Certain elements of work were transferred to another section of the line to balance the operation.

The employee appreciated the personal interest of the foreman. In return for his help, he mastered his job and proved his value to the department. This is only a simple illustration of cooperative relationship between the foreman and the employee, but it emphasizes the importance of good supervision, even in seemingly trivial cases.

Every foreman has a personal responsibility to build and develop voluntary cooperation among the people they supervise. It makes little difference whether you have the most modern equipment at your disposal—you have materials and money—or you are a small outfit struggling for existence. It takes teamwork, cooperation and leadership to guide the business to success.

The economic and social forces of today call for a specific type of foreman, a new type of leader ready and willing to challenge the present pattern of things, a flexibility that permits continuous and automatic adjustment in a rapidly changing world, an ability to deal intelligently with employees and the courage to discharge responsibility fairly and squarely.

I have heard it said that:

(1) If you want people to obey your orders—you should resort to autocratic leadership.
(2) If you want initiative, use free-rein leadership.
(3) If you want cooperation, use democratic leadership.

Every foreman should know and understand these three types of leadership. The kind of response you get from the employees will depend upon your approach and the results you expect.

Authorities are agreed that if you know how to get along with people, if you know how to develop wholehearted teamwork from the employees in your department, you have won the reputation of a successful foreman.

The success of a foreman can be measured to a very substantial degree by his ability to understand the problems of his employees and the type of intelligent response there is to the day-to-day problems.

When there is a human personal relationship, a feeling of belonging to the team, when there is mutual understanding, confidence and respect, there is a well rounded, harmonious and efficient organization.

You are the boss—it is your direct responsibility to carry out the plans. As you carry out these plans remember these six points for good human relations:

1. Keep your promises.
2. Establish standards of discipline and performance and follow them consistently.
3. Treat every man alike. Do not play favorites.
4. Don't cheat or pull a fast one.
5. Encourage suggestions.
6. Maintain good emotional stability.

"Maintain good emotional stability."

The inherent danger of provoking bad relations is always present, but if you are willing to gamble on your ability to conduct the operations ethically, with a sense of dignity and with a spirit of fair play—you can virtually eliminate this pitfall.

At a convention some years ago I was seated beside a middle aged man from company X. I asked him about the operations of his department and just what he was doing to improve conditions and reduce costs.

He told me that he was more or less coasting in his department—because he had made all of the improvements that were necessary and that any further study for savings would only be a waste of time.

There's Always Room For Improvements

Unfortunately there are some foremen like this man. They are the men who swim gently along in the water hoping that some friendly wave will come along and toss them on to a dry land and to a life of ease (as manager of the division).

This state of mind and obvious complacency reminds me of the drunk who wandered into his department one morning to find that candy vending machines had been installed overnight in various parts of the plant. He became intrigued with the dispensing equipment and kept putting in nickels and dimes. Soon he was completely surrounded with all sorts of candy, but he still put in more nickels and dimes.

Finally, the foreman approached him and suggested that he stop wasting his money and take the candy home. "Nothing doing", said the drunk, "I can't afford to quit when I'm winning".

Today many companies are beginning to take a more realistic view of their operations. Serious thought and careful planning have superseded the false idea of a never ending period of prosperity.

All levels of management must now become thoroughly conscious of the value of sound planning. No company can retain the status quo. We either continue to march forward or backward.

We are in a period when there is no time for ducking issues and giving ground. We must have a "fair day's work for a fair day's pay." There must be more and more output per man per

SAM Chapter Performance Awards Report

July 1 to October 31, 1954

New Orleans*	6544	Boston	1606
Lancaster	4525	Cleveland	1532
Philadelphia	3974	Western Mass.	1453
New Haven	3736	Reading	1437
Worcester	3404	Dallas	1412
Twin City	3230	Montreal	1392
Nashville	3155	Georgia	1361
Knoxville	3145	Sacramento	1314
Greenville	3011	Madison	1281
N. E. Pa.*	3008	Columbus	1258
N. New Jersey	2913	Portland	1250
Alabama	2851	Western N. C.	1225
Baltimore	2758	Wilmington	772
Kansas City	2637	San Francisco	650
Binghamton	2472	Central N. Y.	644
Milwaukee	2471	Central Penn.	632
Lehigh Valley	2407	Detroit	489
Providence	2368	Calumet	—
New York	2264	Charlotte	—
Pittsburgh	2220	Cincinnati	—
Trenton	2212	Dayton	—
Clearing	2108	Greensboro*	—
Chicago	2087	Hartford*	—
Hudson Valley	2066	Louisville	—
Los Angeles	2056	Manchester	—
Richmond*	2028	St. Louis	—
Bridgeport*	1914	Stamford	—
Fox Valley	1859		
Washington	1848		
Indianapolis	1842		
Raritan Valley	1702		

* Indicates chapters waiting for committee decision.

hour. When I say "more and more output per man per hour" I do not mean a program of blood and sweat. I do not mean the foreman should demand a speedup in his department, nor do we expect him to exercise force and coercion to gain more and more output per man per hour.

Help The Worker Understand What He's Doing

But we do expect him to ask for a fair day's work for a fair day's pay. An organization is effective when everyone on the payroll is doing a fair day's work regardless of occupation. There are standards and formulas for measuring performance and it is up to the foreman to see to it that the worker finds satisfaction in his job—beyond the monetary returns. The foreman must help the worker to understand what he is doing and to sense the importance of increased productivity to meet the standard.

When you as the foreman get full utilization from the employees—when you have developed your team, when the standards have been met and there is pride in work, cleanliness and employee interest, then you are producing economic and human satisfactions.

Improved Methods

The big opportunity now lies in your ability to improve equipment, reduce waste and through methods study and work simplification seek ways to improve human effort and better the uses of material.

Any consideration of industrial development and cost reduction always brings us to the methods improvement.

1. Study each job thoroughly.
2. Break down the job.
3. Question every detail.
4. Develop the method.
5. Apply the new method.

Talk with employees, with time study men and with other foremen to get their point of view.

Proper Training Necessary For Good Foremanship

A short time ago, I was talking to a foreman about a job in his department. I explained that the cost of producing a particular part was too expensive and sooner or later it may be necessary to buy the part from an outside source. He asked me, "Why should this part be purchased—we are meeting the standard day after day and producing the required quantities to meet production of cars". I explained to him that several vendors would like to make the part, because it would not only be cheaper to us but also, it was suitable to their operations. The foreman asked me to give him a little time before recommending the transfer of the part to the outside.

A few days later he called me down to the department and handed me a rough sketch of some changes he proposed in the method and asked me if the ideas would save time. I promised to refer it to the Methods Engineer for complete study.

The Methods Engineer went to work on the proposed method. In no time the suggestion was approved, new labor routings were written showing a twenty-five per cent reduction in time and the employees were happier because of less effort and a more systematic arrangement of the work. Needless to say, the part is still being produced in our plant.

The longer a foreman works for a manager, the more he understands his wishes. It becomes easier with the lapse of time to sell him on the goals you are trying to reach and the methods by which you can both work together to get the desired results.

Yes, we must place training in the category of an essential to good foremanship.

Anything less than the most effective use of labor and material is waste.

Almost every concern is presently engaged to a greater or lesser degree in re-examining and restating their objectives on the philosophy that the broad guideposts of the past are no longer a safe standard for measuring the steeper paths which lie ahead.

As a consequence plant operating men can do a great deal to keep the cost dollars down. If you will turn the searchlight of inquiry into your own department, you will find that "Perfection" does not exist in the modern day business. The quickly changing conditions of the times cannot be successfully met by the foreman who lives in the past or who resists changes and improvements. Improvements are coming so rapidly these days that any foreman who stands in the way of these changes is damning all hopes of future progress.

The cost objectives of every foreman fall into various categories:

A. *Production*

Face the problem of production fairly and squarely. Make a genuine effort to increase the daily production of your department to meet the established standards. You cannot pay lip service to this sort of undertaking and expect results.

Foremen cannot sit back and trust to luck that the workers will finally understand the reasons for higher productivity. Foremen have a clear and continuous responsibility to bring the facts to the attention of the workers.

Foreman Must Be Flexible To Keep Up With Changes

There may be cries of speed-up, but this problem can be solved with an honest and sincere economic analysis of the job. It has been said: "Time standards do not mean speed-up; they do mean *No Parking* on a busy road."

B. *Manpower*

Plan the work of your department in the most efficient manner and make certain that no job is over-manned. Utilize the time of every employee in the department to the very best possible advantage.

C. *Budgets*

Usually everything a foreman does is interpreted against predetermined

CHAPTER MEMBERSHIP STANDINGS
December 1, 1954

New York	408	Bridgeport	66
New Jersey	378	Providence	66
Philadelphia	328	Wilmington	64
Cincinnati	315	Reading	63
Chicago	278	Lehigh Valley	62
Cleveland	265	Columbus	59
Pittsburgh	247	Hartford	59
Lancaster	234	Central Penn.	58
Detroit	208	Charlotte	58
Boston	201	Alabama	57
Washington	194	Knoxville	56
Milwaukee	155	St. Louis	52
Los Angeles	145	Western Mass.	51
Worcester	145	Clearing	51
San Francisco	142	Central N. Y.	49
Dallas	130	Calumet	48
Raritan Valley	109	Greenville	46
Western N. C.	109	Sacramento	44
Indianapolis	103	New Orleans	41
Kansas City	100	Twin City	40
New Haven	100	Manchester	39
Hudson Valley	98	Fox Valley	35
Baltimore	98	Madison	33
Montreal	94	Portland	33
Binghamton	91	Louisville	29
Greensboro	89	Nashville	29
Dayton	86	Northeast. Penn.	27
Georgia	75	Stamford	20
Richmond	69	Non-Chapter	97
Trenton	69	Non-Resident	82

standards of budgets. Normally, the standard direct time is the common denominator.

The control of standard costs and budgets under foreman responsibility constitutes a tremendous stride forward in manufacturing policy development and application. It gives the foreman a sharp interest in his department and an opportunity to become a more effective member of the management team.

Overhead or burden has long been a dominant element in manufacturing costs. Every item of indirect expense, material and labor in a department should be the direct responsibility of the foreman. It is up to the foreman to live within the budget allowances and if possible do better. This gives the foreman a feeling of ownership—just as though it were his own business.

Foremen Must Keep Men Informed On Company Needs

Your own personal interests are dependent upon the financial showing of your company. If you apply the same personal thrift to your department that you apply to the expenses in your home—you will help the company and you will obtain maximum satisfactions from life.

D. *Safety, Orderliness and Quality*

Safety, Orderliness and Quality go hand in hand. They are definitely a part of good housekeeping. A clean, safe and orderly department reflects pride of work, minimum of scrap and teamwork.

A Foreman's First Duty: To Be A Leader

More and more, I observe that the foremen who are getting real results in their department are the ones who stand for quality. They are the men who never split the difference—who never cheat on quality, but strive for a good acceptable product in line with specifications and correct standards. There is a deep satisfaction in producing quality work.

During rush periods, when higher production is the number one requirement, it is very difficult to emphasize quality ahead of quantity. In our company, we cannot afford to let down the bars on quality, irrespective of the reasons. A Packard car is a quality car and at no time is higher production an excuse for poor workmanship *Quality First* has been a motto of the Packard Motor Car Company for the past fifty-five years. Without quality it would not be practical to continue our slogan *Ask The Man Who Owns One.*

Now, directly to the foreman himself—your position means you are a FOREman, a leader of men. As a leader you must discriminate between men and materials. Men have pride and they have feelings.

You can open the doors to happiness and achievement for the employees, or you can hurt them mentally and physically.

You can give them credit where credit is due, or you can dampen initiative and fail as a leader.

You can give a square deal, or you can duck the issue and remain a dud.

You can inspire teamwork and give the employees the feeling that you are on the team, or you can create a fool's paradise and die a hermit.

You can be a FOREman and a Leader. You can create goodwill, enthusiasm and allow for a natural development in group experience, or you can selfishly grab all of the credit for yourself and throttle initiative in the young men who can greatly enhance your position with new ideas.

I often wonder how many ideas have been lost to a company because the workers were not encouraged to contribute their ideas for improvement.

Encourage Your Men To Go Forward, Not Backward

Amidst the seemingly unsurmountable obstacles of today, we must vision a tomorrow of even greater records. We have to make progress because at the outset I said, "No company can retain the status quo—it must either continue to march forward or backward."

It is truly a cooperative effort in which every foreman must play a part. We look to you for boldness, for the spirit to advance and the willingness to ignore the patterns of the past.

The future will tell the story. We win or lose depending upon technical skills, qualities of character, diligent use of the brains and fair and unselfish leadership.

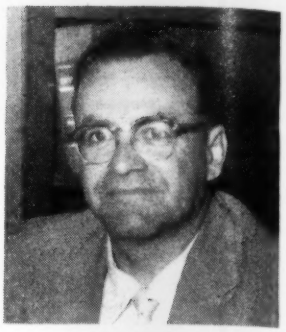
Upon the preparations of today rest the fondest hopes of tomorrow. END

How Industry Is Using

SAM Rating Films

- Reduce time, cost of time study training
- Select trainable applicants of Personnel
- Strengthen union's confidence in time study
- Reduce, expedite grievances
- Increase rating skill and consistency
- Build standard data
- Derive predetermined times
- Set new standards, audit old ones
- Explain philosophy of time study technique
- Help company make its own films

FREDERICK W. NOVIS received his Ph. D. in 1951 from the University of Connecticut, and has spent much of his business career in rehabilitation problems. He is a prominent authority on the subject of the handicapped in industry, and has served as Secretary for his state's Governor's Committee on the Employment of the Physically Handicapped.



Management Techniques In Vocational Rehabilitation

by F. W. Novis, Ph. D.
Rehabilitation Bureau
Connecticut Education Dept.

Here an authority clearly tells several ways management can make good use of the physically handicapped. Far from harming production standards, overall surveys show they operate with unusual efficiency. How they can be used, and where, and how management should adjust to this new pool of labor, is outlined fully here.

THE RIGHTS of management and the rights of labor have been the subject of many controversial discussions. These are important issues, but there are some worker-management relationships and rights about which there should be little or no controversy. I refer to the effective rehabilitation and utilization of the manpower of the disabled. In this connection, what are the respective rights of management and of the worker?

Management has the right to expect disabled workers to produce as well as any other persons on similar jobs. The worker, on the other hand, has the right to an equal opportunity with others who are not disabled to utilize his capacities and skills. These rights were stated better by John D. Rockefeller, Jr.: "I believe in the dignity of labor, whether with head or hand; that the world owes no man a living, but that it owes every man an opportunity to make a living."

Most everyone will agree with the idea that the world owes no one a living merely because he is disabled, nor would many deny a person an opportunity to make a living for this reason alone. However, management practice does not always make it work out that way.

What management practices may be required to accomplish this goal of equality in productivity together with equality of opportunity to be productive? The development of management techniques to assure an adequate balance of rights is based upon several factors such as: 1) management policy and attitudes; 2) knowledge of how the handicapped compare with others; 3) management practices in the selection and adjustment of workers and 4) degree of cooperation with rehabilitation agency.

The absence of a clear-cut management policy on the employment of the disabled often leads to inconsistent practices which may violate the rights of management and the rights of workers. In the absence of a policy the attitudes of the "hiring" official come into play. He may be over-sympathetic or unusually "hard-boiled." Neither extreme in attitude is justified by the facts known about the disabled. On the other hand, many industrial leaders who know these facts have taken positive steps to devise a policy and have found hidden sources of valuable manpower in the disabled. Dr. Howard A. Rusk, Chairman of the Health Resources Committee of the Office of Defense Mobilization has this to say about this problem:

"The fact that we no longer need to think only of jobs as janitors, night watchmen, elevator operators, and railroad crossing guards has been demonstrated by those pioneer companies who have always made it a policy to employ the handicapped . . . ." For example, at Lockheed Aircraft it was possible to place cardiacs in 99 of the company's 353 job classifications. At some Westinghouse Electric Company plants, approximately 19% of the jobs can be performed by persons having only one leg, 17% by those who use crutches, 83% by men with only one eye, and 83% by the deaf. An enthusiastic employer of the handicapped for many years, the International Business Machines Corporation now has nearly 500 severely handicapped persons working in its plants at Endicott and Poughkeepsie, New York. The 65 different jobs they perform represent practically every type of job in IBM production."

The President's Committee on National Employ the Physically Handicapped Week has set forth a recommended policy for employment of the physically handicapped in public em-

ployment. These statements are a useful reference point for management. In part this policy provides that: 1) physical standards will be fair, reasonable and adapted to the realistic requirements of jobs: and that an opportunity will be provided for a fair appraisal of pertinent qualifications of physically handicapped applicants and employees.

In addition the President's Committee posed the following questions which go to the heart of management policy in employment of the disabled:

1) Do you have a realistic, up-to-date policy relating to physical standards for jobs?

2) Have you abandoned the unrealistic out-of-date single-minimum physical standard for all jobs?

3) Does your policy provide for hiring according to the physical requirements of each job?

4) Do you know what your jobs actually require in physical abilities?

5) Does your policy provide for hiring handicapped workers for jobs that they can do efficiently and safely?

6) Have you made this policy known to those doing the hiring?

7) Do the hiring practices conform to your hiring policy?

Adaptation Of Work To The Man An Old Issue

The matching of men to jobs is a common practice which includes elements well known to personnel men. While the quality of the analysis may vary, this procedure always includes information about the job and information about the applicant. In many instances this involves job descriptions and on the worker side may involve psychological tests and medical examination to discover assets and liabilities.

The most important side of this problem in terms of maximum productivity is the adjustment of methods and machines to persons already on the job. This adaptation of work to the man was stressed by Frank Gilbreth, pioneer in time and motion study. Illustrating this technique is the study by Stanley L. Samuels made at the William Brand Company, Willimantic, Connecticut under the supervision of the University of Connecticut and in cooperation with the Hartford Chapter of the Society for the Advancement of Management and the Bureau of Rehabilitation of the State Department of Education.

Based on this study a job formerly held by a sighted, non-handicapped individual was redesigned to be performed by a blind person. In addition to the new opportunity created for a severely disabled person, the new method showed a 20% decrease in unit assembly time compared with the original method.

Components Of A Careful Selection Procedure

Good management practices in securing maximum productivity from disabled workers who are already on the job should not ignore selection procedures which will feed in the valuable manpower of new workers. Worker selection procedures should emphasize positive skills and abilities rather than the one negative characteristic of a handicap. In this connection, a medical examination for potential workers can be used to screen out valuable workers, or to recognize limitations and yet use the remaining assets. Some insurance companies, fearful of the prognosis of certain disabilities, entirely close the door on valuable productive skills. On the other hand, a medical director of a large industrial plant has found that the mortality rate of the many cardiac workers in this plant is lower than the rate of the general population for this disability. Careful selection procedures involve not a screening out of a whole disability group, such as cardiacs or epileptics; rather they involve an analysis of each individual and his limitations and strengths.

The state rehabilitation service in its day to day operations makes every attempt to work with management on problems of utilizing the disabled. Since there are thousands of employers, the task of rehabilitation to accomplish closer cooperation with management in any large scale manner is too large for a small bureau. In this connection management can be of great assistance by calling on rehabilitation in connection with problems of the disabled. It is easier for management to seek out one bureau than for rehabilitation to seek out the problems of thousands of businesses. In an effort to secure management initiative in this connection, I presented a five point plan which was published in the February 1951 issue of Connecticut Industry. In brief this plan is:

Point One—Employers should refer to the Bureau of Rehabilitation any disabled job applicant who has been rejected for work for reasons of disability, lack of skill, or need of physical correction. The routing of such persons to the Bureau will enable their careful evaluation as well as the provision of needed services to make them employable.

Point Two—Employers can secure the services of pre-employment or employment training for specific jobs in their own establishment. Such training plans for the disabled are arranged on an individual basis cooperatively with the employer and may be partially financed by the Bureau up to the point required for the employee to become a profitable worker.

Point Three—In cooperation with various groups the Bureau of Rehabilitation can provide clinic facilities to pre-screen applicants for particular employers or to provide detailed information regarding a pool of the disabled who are awaiting suitable employment.

Point Four—The Bureau of Rehabilitation can offer services to employers regarding the adjustment of disabled employees now working, but who may have problems due to employment accidents, need to change jobs or require services to retain satisfactorily their jobs.

Point Five—Employers can make the Bureau of Rehabilitation their service station for applicants whom they desire to hire but who require some special service before this can be done.

In addition, the Bureau of Rehabilitation is interested in securing the cooperation of management in several "work orientation projects" on behalf of the disabled.

Various Work Orientation Projects Being Tried

One plan involves the opportunity to try-out handicapped persons on real job situations to accomplish job adjustment without job change, but with finding of the right job after tryout of several tasks. Such a project is now in progress at the G. E. Prentice Manufacturing Company, Kensington, Connecticut.

A second plan involves cooperation with industry in improving work methodology. Emphasis here is change of methods and machines to match job to disabled man. This project has already been mentioned.

A third plan involves emphasis on human adjustment factors. Here a job situation is used for a disabled client as

the means of observing work habits, ability to get along with fellow workers and the like. Various units of the State Department of Education have provided such personal adjustment opportunities.

Finally, guides are being developed which will be used to gauge specifically the degree of job readiness of a disabled client. These factors involve the client's knowledge and understandings about himself and about work which are required in holding a job. The factors involved include health, psychological and occupational elements.

Above all, it is important for management to learn more about *how the state program of rehabilitation works.*

Analysis of the handicapped by the state rehabilitation service involves tapping of skills, interest and abilities as well as physical capacities and limitations. This procedure is similar to techniques used in modern personnel selection. Psychological tests and analysis of work experience are used in this appraisal. Medical examinations provide guides to physical capacities and limitations. The examinations are used to find residual positive and useful physical capacities and not simply to locate defects.

The assets and liabilities disclosed by the analysis are used as the basis of counseling in the choice of a suitable vocational goal.

Interests and personality are fully as important as abilities. The final choice of the goal is the product of the client and the counselor. This is a sound basis to secure job satisfaction.

The rehabilitation program provides a constructive basis to develop skills through the provision of training. Training programs may be at regular schools, by correspondence, by tutor or on the job. Sometimes needs are highly individual and require special personal adjustment services, such as lip reading, speech correction, remedial reading, walking with crutch or artificial limbs. Others require training under job situations. These may include sheltered employment, job try out, or a warming-up period to assure that real employment can be achieved successfully.

Corrective services, both surgical, medical and psychiatric are often required by individual cases. The correction and improvement of physical fitness often removes many barriers to satisfactory employment. Psychiatric treatment frequently removes the effects of mental disturbances.

The rehabilitation service like management is interested in harmonious employee-employer relationships. Each handicapped client who is ready for employment is ready to work safely and effectively on the selected job which has been established through the entire rehabilitation process. The rehabilitation service is interested that this is demonstrated before case activity for the disabled is terminated.

Does management know how disabled workers stand in production, safety, quit rate, absenteeism, abilities and skills? A joint study by the U. S. Department of Labor and the Veterans Administration matched actual work records of 11,000 disabled workers against those of 18,000 non-disabled workers performing identical tasks in more than 100 plants. The following facts were found:

1. In *production,* impaired workers, as a group, produce at slightly higher rates than unimpaired workers on the same jobs.

2. In *safety,* impaired persons sustain fewer disabling injuries than non-impaired persons exposed to the same work hazards.

3. In *quit rate,* there is no significant difference between the voluntary quit rate of impaired workers and other workers.

4. In *absenteeism,* physically impaired and unimpaired workers have about the same absenteeism records.

5. In *abilities and skills,* the handicapped have the same wide range of skills, abilities and interests as the non-handicapped.

In summary, what are the management techniques which should be developed in connection with the vocational rehabilitation of the disabled?

Management should recognize that a balance must be maintained between the right to secure productivity and the right of the worker to use his productivity. A distortion of this balance on production to the exclusion of worker safety, for example, is a dangerous policy. Likewise, an over-sympathetic emphasis on worker satisfaction to the exclusion of profitable production is an unrealistic business practice. A phobic insistence on safety which would bar whole groups of handicapped is equally unsound. To be ruled out of working usefulness because a disabled person cannot do many jobs is another serious distortion of rights. Does it make sense to require fire fighter physical standards for a fire department employee whose job is to answer the switchboard?

In achieving this balance what part can management play?

First, management should develop a clear-cut policy on the employment of the disabled. Such a policy, once known and understood by all concerned with personnel administration, will eliminate inconsistencies and prejudices and will assure careful selection and adjustment procedures.

Second, management and its implementing units should attain an adequate knowledge of how the handicapped rate as workers. Once this knowledge is gained there is only one conclusion—"it is good business to hire the handicapped."

Third, management should develop adequate procedures to adjust jobs to workers, to gain productivity as well as to open new opportunities for the disabled. In addition employee selection techniques should be devised to find assets and not for the purpose of finding only negative qualities.

Bureau Of Rehabilitation Aids Industry

Finally, management has the public service of the Bureau of Rehabilitation to turn to for assistance with the disabled on an individual basis, and in general problems of the utilization of the manpower of the handicapped. Moreover, the Bureau of Rehabilitation is an important adjunct in assuring a balance of rights in problems of disablement. For through the services of guidance, training, and physical correction, the many assets of the handicapped are strengthened for ready use by management in achieving profitable production. END

Is Your Chapter In the

BOOSTER CLUB?

The Booster Club was organized to give recognition to members of SAM who are taking active part in the growth of The Society. Names eligible for this club should be sent to your National Vice-President of Membership.

WILLIAM S. WILCOX has 31 years of Industrial Relations work in industry behind him. Since 1952 he has been a faculty member of University College, Rutgers University, in Industrial Relations and Management. He is a former Seminar faculty member of Industrial Relations at Princeton University and Industrial Relations panel member at Wharton School, University of Pennsylvania. Mr. Wilcox has also authored numerous books and papers on areas of business management.

The Supervisor Is The Practising Personnel Man

by Wm. S. Wilcox
Industrial Relations Lecturer
University College,
Rutgers University

The author believes that most supervisors don't have the time for—and industrial relations staffs don't share responsibility for—employee relations problems. He believes these two voids are at the root of a large part of employee disputes which are causing a tremendous economic waste.

"THE idea that we are making substantial progress in solving our employee relations problems is one of the greatest hoaxes of modern industry' . . . So spoke recently an unusually tough-minded personnel director.

He might have added that the employee relations problems in the majority of unionized companies are no longer the active concern of the industrial relations staff. However, they are still discussed academically as important responsibilities of management at the numerous conferences on the subject held by universities and business organizations. The collective bargainers are 'solving' the problems that management abdicated to them.

Consider this executive statement: "In recent years the unions have discouraged contact with individual employees and have required that all matters, however trivial, be handled through union channels . . ." Also, the interpretation placed upon industrial relations responsibilities by a representative manager: "The industrial relations activity is purely a staff or advisory function; nor is its main function to represent employee viewpoints to management."

Needless to say, employee viewpoints have a habit of getting represented. If Industrial Relations people consider the need of secondary importance, the unions have proven themselves happy and eager to acclimate themselves to the opportunity. It is doubtful if even a small portion of responsible management realizes how this all came about.

Personnel Management or Industrial Relations as primarily a wage-hour benefits maintenance and survey function, is a relatively new development having its genesis in the mid 30's. During that expansive period some moulders of management opinion, without corporate accountability, foisted upon management the now widely accepted concept of Industrial Relations as a purely staff activity. Under this concept, the line supervisor became the practicing Industrial Relations man, the trained Industrial Relations staff became a standby facility to be called upon for special needs. The activities that remain as responsibilities of the Industrial Relations function were described recently by Peter Drucker, the eminent labor economist, as follows:

"Personnel Administration is largely a collection of incidental techniques without much internal cohesion, none of such a nature or importance as to call for more than moderate capacity in its management. None by itself has major impact upon the business. By putting these activities together in one function we do not thereby obtain a major function entitled to representation in top management or requiring the services of a top executive for its management."

In the words of an observant member of the author's Personnel Management Course: "I think of them as firemen; they come in and put out the fire." In this interpretation—and it is supported by the record—the sparks that cause the fire and the fuel that feeds it are no longer the assigned concern of Industrial Relations people.

One of the most widely advertised exponents of the pure staff concept of Industrial Relations conducts trade school courses in foremanship. Its catalogue initiates the 1954 season as follows:

"One of the most marked trends has been *the steady transfer to the line of functions and duties formerly carried by staff*. Of great significance is the new and fuller role of the supervisor for labor relations, training, communications and personnel administration." A page and a half of the brochure details

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The Society for Advancement of Management, 74 Fifth Ave., New York City

The Supervisor's Role In Personnel Administration. It assigned the following personnel responsibilities to the line supervisor:

"Supervisor's role in the selection of new employees: coordinating his activities with personnel department, making personnel requirements known to employment manager, writing the personnel requisition slip. The supervisor's role in the job interview: the technique of the interview, how to conduct a resultful interview. Supervisor's role in orientation of new employee: his follow-up of preliminary employee orientation conducted by personnel department, follow-up explanation of company rules, benefits, working conditions, etc; introduction of new employee to co-workers, showing him locker rooms, etc. Supervisor's personnel responsibility during employee's probationary period: weeding out the worker who does not "measure-up" before he acquires seniority status; liaison with personnel department during this period. Supervisor's relationship with union in carrying out his personnel duties: supervisor as both explainer and administrator of company policy; his duties in enforcing company discipline and making sure that rules are applied consistently and fairly. Supervisor as wage and salary administrator: keeping his department's wage costs in line, how to merit rate, how to conduct the employee merit-rating interview, job-evaluation responsibilities. Personnel record-keeping: wage and salary data; transfers, promotions, demotions, terminations, absences, punctuality, production records, grievance-settlement records, etc; what facts are needed to maintain simple but adequate personnel records; how to evaluate utility of personnel forms. Supervisor's day-to-day relationship with personnel department: integrating the overall management personnel function."

Developing Awareness And Competence In Foremen

However, the man has other activities for his 'knitting time'. For example, in Employee Training and Communication greater awareness and competence in foremen is developed through a course which covers:

"Supervisor's responsibility in training his own subordinates. Training the new employee; on-the-job training; personal coaching; training the transferred or recently promoted employee in the

duties of his new assignment. Employee training in job-enlargement program. Group training as a device to improve department or divisional efficiency. Training methods: conference leadership: straight lecture. Training as a tool to improve quality of production; reduce scrap, prevent accidents, etc. Measurement of the effectiveness of the individual supervisor's ability to apply the training methods he has been taught to his own operation. The supervisor's responsibility in determining specific training needs, his role in coordinating his training program with that of overall company training program; how to delegate training responsibility to assistants or working group leaders; follow-up duties.

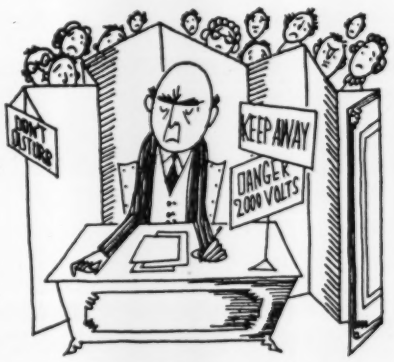
"The role of the supervisor in explaining company policy or policy changes to employees. Effective oral and written communications; the supervisor's role in a program of economic education; supervisor's communications function during critical and crisis situation: i.e. strikes, slowdowns, organizational drives, etc. Cooperation between supervisor and personnel department in strengthening communications system. Methods of evaluating effectiveness of training and communications programs."

And there is a course for foremen in Labor Relations. "The foreman's responsibilities in a work stoppage, and a representative election . . . aid to management in preparation for contract negotiation, analysis of existing contract clauses . . . suggestions for improvement . . . explanation of the contract to employees, accurate employee records of attendance, punctuality, reprimands and individual records on quality and cost of production, employee communications during crisis periods in labor-management relation."

Employee Relations Problems Increasing

No one could rightly deny that all of the foregoing activities and their innumerable details have to be done. Many do question the unshared responsibility to be placed on the production supervisor, the man whose overriding responsibility is to get out the work on time and within allowable quality and cost limits, with the manpower and equipment available to him and under the wages, hours and working conditions imposed upon him by higher authority.

The startling record of work stoppages caused by employee relations problems indicates that the line supervisors prefer to attend to their production duties, and the inevitable conclusion is that just as they normally do not need staff advice on production problems, neither do they feel a pressing need for preventive staff advice on employee relations matters. Whereas strikes over union organization have decreased steadily and disputes over wages, hours and fringe benefits are declining, work stoppages over employee relations problems are increasing at an alarming rate. They account now for over a third of all the work stoppages and have increased in ratio by 290% from a low point in 1937. This low point came about the time the new staff concept of Industrial Relations was first launched.



"The supervisor is a production man and he will never forget his job is to get out the work . . ."

The coincidence of the new Industrial Relations concept and the Wagner Labor Relations Law enactment is striking. Thereafter occurred the most intensive and successful unionization drive in our industrial history.

In 1952—the latest year of record-reported work stoppages due to causes other than unionization, wages, hours and fringe benefits were more than in any year but one for the past three decades. They idled 1,240,000 employees for a total of 20,960,000 man-days. Since 1937—the approximate year of the inception of the new Industrial Relations deal—the record is fairly incredible. Recorded employee relations problems numbering 17,620 led to the idling of 11,161,000 employees for a work loss of 117,696,400 man days.* Using an average day's pay of $9.00 for the full period, the wages and salary loss to the workers has been well over one billion dollars. The loss in direct production for the companies involved plus the losses of other establishments or industries whose employees were made idle as a result of material or service shortages, defy calculation. With these losses in mind, it might be opportune to reexamine the practicality of the line supervisor having the sole and unshared responsibility for handling employee relations problems that harass him in his production duties. It is unduly optimistic to expect the record will reverse itself so long as more and more staff activities are being added to his production responsibilities.

Management Must Know About Employee Thought and Action

The superivsor is a production man, and he will never forget that his job, first and last, is to get out the production. There is a lot of theory spoken and written about the human relations responsibilities of a supervisor. It is usually uttered by people who do not supervise. The brutal fact is that the people who have the time to redraft the supervisor's job have no production accountability. A frank analysis by management of the confusions pressed upon the line supervisor by the excessive demands placed upon him would be a step towards understanding the causes of the employee relations problems that are leaking away wages, salaries and profits.

A concurrent analysis of what is being done by the Industrial Relations staff should lead to a redesignation of some of the human relations activities. It can hardly be denied that the function of Industrial Relations has departed a long way from its original intent; it is probably at this writing the only staff organization in business that has no free contact with the subject matter it is expected by management to be expert in —employee thought and action. Most supervisors don't have the time for, and the industrial relations staff doesn't share the responsibility for, employee relations problems. These two voids are at the root of a large part of the employee disputes which are causing a tremendous economic waste. END

All statistics are derived from* ***The Economic Almanac 1953-1954* *published by the National Industrial Conference Board which in turn credits the Bureau of Labor Statistics.*

JAMES WRIGHT SIMPSON is a Chartered Accountant, a designation which in Canada corresponds with our own CPA degree. He has been a senior auditor and systems analyst, has served as a lieutenant in the Royal Canadian Navy. He is an active member of SAM, belongs to the AMA and the National Association of Cost Accountants

Tomorrow's Manager Will Be A Generalist

by James Wright Simpson
Managing Director
Leetham, Simpson, Ltd.
Montreal

Yesterday a management man could succeed by playing on a single string, says the author. Today he must be able to lead an orchestra. The day of the generalist is at hand, he says, and tells how modern business can develop tomorrow's type of management man by applying a few clear rules to upcoming young managerial talent

NEARLY everybody talks about executive development and management training these days. The need to improve the capabilities of our business administrators and executives is understood by most management. There is also a great need to bring along more young men who will have, or can develop, qualities of industrial leadership.

How many people, feeling these needs, have a clear idea of exactly what it is that they would improve? Given a young man to mold into a manager, by what principles would they go about the task?

If we can not put our finger on the qualities that characterize the competent executive, we obviously can not train for those qualities, except by blind, hit-or-miss methods.

It may be that we have too many management specialists filling positions where management generalists are wanted.

We all know the specialists—the engineers, accountants, sales experts, and so on. There's a shortage of good ones, perhaps, but they can be found. Most important, we have a knowledge of what makes a good specialist in most fields so that we can identify the good man when he comes along.

But try to find a management generalist, a man whose main qualification is that he can manage, not only a company, but any given part of a company. We hardly know how to define what we seek when we ask for that kind of man. We have a tendency to ask for one whose long experience proves his capabilities. Few know how to put a name to the qualities they seek, or how to spot them in the man who has them.

How often have you known a company to advertise for a manager—simply that, a manager? Rarely, if ever. We advertise for a sales manager, a production manager, and advertising manager. But not for just a manager.

Management would seem to be the one field of human activity in which a man is expected to advance, not because he is capable of managing, but because he has been a success as a specialist.

We have been telling ourselves for a decade or more that the best workman doesn't necessarily make the best foreman. Foremanship requires something more, we admit. Yet foremanship is the lowest rung on the management ladder. If it be true that leadership of a crew of 20 or 50 requires something over and above the job skill of the crew members, how much truer that management at the top level requires more than, let us say, ability as an engineer?

The good engineer won't necessarily make a good vice-president in charge of production. There must be something added. That something is not mysterious. It is management skill.

To take another example, who among us has not seen the happy star salesman promoted to district manager, with better title, better pay, better prospects, only to flounder miserably in his new work until, eventually, he is replaced by another star salesman?

Is it too obvious to remark that there is more to sales-managing than simply knowing how to sell? Count the number of companies you know that give their district sales managers any training in management techniques and skills. Chances are you can count them all on the thumbs of one hand.

Obvious the need may be, but obvious or not, it is seldom satisfied. Again I ask, if the need for management training exists at the district-manager level, how much more greatly must it exist at top levels of management?

This is not a subject to write a book

about when we have reached retirement. It is a necessity to be attended to today. The responsible leader who is aware of his duty to his shareholders, his employees, his community and his country, all depending upon the enterprise for some portion of their wellbeing, will see that it *is* attended to.

Competitive Pressures Show Up Narrow Specialists

Top executives in the U. S. and Canada average some 12 years older in the 1950's than were their counterparts in the 1920's. We can assign causes—two world wars, a great depression, vast expansion, failure to develop a system capable of producing as many and as able young managers as the industrial economy requires. But assigning causes does not supply the deficiency.

Competitive pressures, too, bring out the shortcomings of the narrow specialist attempting to function in a broader field, and point up the merits of the all-around man with wide knowledge and the broad point of view. Such men don't just happen. They are created, either by themselves or by the pressure from without. At this particular point in history, the competitive pressure from without is compelling us, willy-nilly, to turn our attention to the problem. Aware of its existence, we need only two things more: the knowledge of what to do about it, and the will to do it.

What needs to be done. First, the management prospect must have his outlook broadened. He must be given guidance in analyzing the facts and the implications, as well, of his executive and administrative position. He must be aware of his function as a leader, and of his company's function as a factor in the way our portion of the world lives.

We must acquire skill in human relations, which bids fair to dominate the next 25 years as industrial engineering has dominated the past 25. People, even more than money, materials and methods, are the medium in which he must move and the means by which he must accomplish his proper aims. People on the production line, people in lower and middle management, people on the investment market, people as his local community, people as government.

The manager must learn more human arts, how to lead, how to inspire, how, in a blunt word, to be politic. And, with people, the greatest need is the need to communicate effectively. Not simply how to write, how to speak; but how to understand, and how to motivate; how to weld into a single-minded social group with the aim to produce efficiently, a diverse and haphazard congregation of individuals. This is among the most important of the things the management prospect must learn.

New Techniques For Teaching Management Skills

He must also acquire a knowledge and appreciation of sales, production, finance, industrial relations, organization and like matters—not in order to be a jack-of-all-trades—but in order to maintain a fair and just balance among the elements of his command.

There was a time, in a freer age, when a fine rage to build or create, or an aggressive urge to sell, might make a great business or industrial leader of a man. Our society has become more complex, however, and the day of the entrepreneur who could make good music on a single string has passed. Today it takes a symphony orchestra, and the direcor must be a man of many parts, with a fine ear and an ability to win support, to bring order out of what would otherwise be chaos.

The knowledge of what constitutes this element of managerial skill, the something added that makes the top job equal to more than the sum of its parts, is available. Techniques for teaching it are known and are being applied. But the effort must be much more widespread than it is.

Today management has caught up with and, I believe, surpassed the older established vocations. Business and industrial leadership today is among the foremost of professions. It is a learned profession, and it requires the cultivation of mind and character, the breadth of knowledge, awareness and understanding, the acceptance of discipline, that have always been associated with that respected term.

It is our responsibility to do all in our power to live up to the designation that the turn of events has thrust upon modern industrial managers. END

DEMOCRATIC PHILOSOPHY OF MANAGEMENT

THE leader will appreciate that organizations are always means to an end, agencies to help achieve what people want. It is the human beings themselves who are the ends. . . .

What has proved true in religion, in armies, and in politics has to be made true in the other kinds of corporate efforts. People require the leader to help show them the experience which convinces them that their loyalty to the group is a good thing for them.

The truth is that in a democratic society the opportunity for leadership multiplies enormously once leadership is understood in its psychologically sound essentials.

The danger in our own country is that too little praise is given rather than too much. It is the rare leader today of whom it could be said that he "slops over" in telling his followers how well they are doing. Of course too much praise, or praise uncritically given, loses its tonic value. Judgement and good sense must be exercised. But individuals properly crave the assurance and the confidence which come from knowing that they stand well as members of the groups to which they belong. The real danger in a democracy is the danger of mediocrity and uniformity, of popularly imposed standards of right and value. The danger is lack of guidance, of direction and of spiritual excitement.

The opportunity to lead fairly shouts aloud for its chance in every organization and institution which brings the citizens of a democratic community together. For in every area of action people are seeking to fulfill themselves. They deeply want to rise above a nominal or legal achievement. But to do this they have to be led. They have to be brought into effective group relationships which are certainly not spontaneous, but the creation of those in the vanguard. Such relationships in a complex society are the necessary condition of self-release and indeed of self-being for everyone but geniuses and prophets. The leadership predominately required is not that of such supermen, valuable though these rare individuals are in creating new reaches of human vision and aspiration. The demand is, rather, for a multiplicity of leaders in many fields. Leadership must be at work in every common, workaday situation where one person directs others. It is not alone concerned with important causes and large movements.

"The Art of Leadership" by Ordway Tead.

New Management Writing . . .

Behind The President

By Edward H. Hobbs. Published by the Public Affairs Press, Washington, D. C. 248 pps. $4.50

Management men interested in improving their knowledge and understanding of the biggest management job of all—the Presidency of the United States—will find Dr. Hobbs' study, *Behind the President*, an engaging and profitable undertaking. As the title implies, the volume is primarily concerned with an examination of those agencies of government now identified with the Executive Office of the President.

One of the most vexing issues before the Constitutional Convention of 1787 was that of the nature of the executive branch of government. It was pretty well agreed that the Executive Committee of the Congress under the Articles of Confederation was not an effective instrument for administration, but there was widespread disagreement about the nature of the executive branch as a separate and distinct division of government. With the adoption of the Constitution, providing a single elected executive who would serve a specified period and be responsible for administering all the affairs of state, the possibility of "spreading the President thin" was clearly recognized. This possibility has long been realized and has given rise to a wide variety of "staff" agencies designed to serve the President of the United States.

The job of being President has, of course, become increasingly complex and burdensome as the country has grown larger and more powerful, as economic life has become more interdependent, and as technological advances have ushered in the atomic era. George Washington's administration did not have to deal with a wide variety of international organizations, did not have to submit a correlated executive budget, did not employ a Council of Economic Advisers, did not have to supervise a large White House Office staff, did not have a National Resources Planning Board or a National Security Council. Washington did not conduct press conferences, address the nation by radio and TV, or perform many of the ceremonial acts which are now expected of the President. In 1789 President Washington approved 54 public laws and issued exactly three executive orders; in 1939 President Roosevelt signed 502 public laws and issued 287 executive orders. President Washington submitted only a handful of nominations for Senate approval; President Truman submitted more than 40,000 in 1948 alone. President Washington was responsible for only nine agencies of government; President Truman was responsible, in 1948, for 69 agencies.

The absolute necessity of dividing the labor load assigned to the President of the United States is of course obvious. But how has this problem of administrative management been handled? Have we adhered to a well-disciplined body of administrative doctrine to help resolve the problem of Presidential staffing? Or has the whole problem been approached without too much regard for some of the time-honored theories of staff work? Are administrative *unity* and *efficiency* necessarily synonymous in an organization so vast as the national government? To what extent are theories of "integration" and "span of control" applicable? It is these and other questions with which Professor Hobbs concerns himself.

In the opinion of this reviewer, Professor Hobbs succeeds admirably in doing two things: (1) He brings the Office of the President into excellent historical perspective; and (2) He provides us a fresh, authoritative, and readable examination of the agencies comprising the Executive Office of the President. In short, he helps us to improved understanding of the vast and complex machinery of government associated with the Presidency of the United States.

As expected, most of the volume is devoted to a rather detailed examination of the development and functioning of various Executive Office agencies. Almost 200 of the book's 248 pages are devoted to the following agencies which presently comprise the Executive Office of the President, established in 1939: (1) The Bureau of the Budget: (2) The National Resources Planning Board; (3) The White House Office; (4) The Council of Economic Advisers; (5) The National Security Council; (6) The National Security Resources Board; and (7) a variety of emergency mobilization agencies. There is a chapter devoted to each of these agencies, plus a concluding chapter on "The Machinery Under Eisenhower."

In order to carry out the "impossible" burdens of his complex position, the President must be systematically informed of those matters of top-level importance; he must be assisted in the job of looking ahead and planning future programs involving the welfare of us all; he must be protected from the nuisance of subordinate affairs which could waste his energies needlessly; he must get priority matters to his desk without delay; and he must secure compliance with his orders. The problem here is one of administrative management, and the machinery is that of the Executive Office of the President. Professor Hobbs is at his best in discussing the machinery involved, and in so doing demonstrates that which is rather obvious: it is extremely difficult to discover a consistent adherence to a well-disciplined body of staff theory in the growth of Executive Office agencies. What we are likely to have for a long time to come, Professor Hobbs concludes, "is a system which relies mainly upon the pragmatic responses of capable public administrators to the challenges of Presidential government.

Robert H. Laws, Director
SAM Economics Program

Workmen's Compensation

By Herman Miles Somers & Anne Ramsay Somers. Published by John Wiley & Sons, Inc. 340 pps. $6.50.

A comprehensive analysis of occupational disability — its prevention, insurance and rehabilitation. This is a definitive work. It starts with the objectives of workmen's compensation and traces in detail compensation history, legislation, administration, litigation and insurance.

Management's role in safety, health and rehabilitation is examined and illustrated with case studies. The U. S. compensation program is contrasted with British and Canadian programs.

Here is a valuable aid to executives in industrial relations, personnel administration, safety, health, rehabilitation, and compensation litigation.

Tribute To B. Seebohm Rowntree

AMERICAN leaders in education, industry, scientific management, and sociology joined members of the Society of Friends at the Wallace Clark Center of the International Management of New York University' School of Commerce, Accounts, and Finance the afternoon of December 17th to pay tribute to the life and work of the late B. Seebohm Rowntree.

Mr. Rowntree, British industrialist, philanthropist, social pioneer, and author, died on October 7th at the age of 83 in his home in Buckinghamshire, England. He headed the firm of Rowntree and Company, Ltd., one of the world's largest chocolate manufacturers. He was vitally interested in housing, unemployment, scientific management, and industrial research, and devoted much of his life to the improvement of conditions among the men and women in British industry and agriculture.

A prolific writer, he numbered among his works "Poverty and the Welfare State," "The Human Factor in Business," and "Human Needs of Labor." Just prior to his death he had embarked on a study of ways and means for deepening the spiritual life of Britain.

Among his collaborators in the field of scientific management were such men as Henry Dennison, Frank Gilbreth, Wallace Clark, the late Lord Astor, and Lord Lothian, former British ambassador to the United States.

Principal speakers at the memorial meeting were Dr. Joseph Willets, former dean of the Wharton School at the University of Pennsylvania; Mrs. Wallace Clark, head of the center named for her late husband; John S. Sinclair, president of the National Industrial Conference Board; Dr. Leland Robinson, adjunct professor of political economy at NYU's Graduate School of Business Administration; Dr. Spencer Miller, Jr., adjunct professor of management at NYU's Graduate School of Business Administration and former U. S. assistant secretary of labor; the Reverend Thornton Penfield; and Miss Patricia Hall, management consultant, formerly with the firm of Rowntree and Company, Ltd.

The benediction was given by Dr. Harry Emerson Fosdick, pastor emeritus of Riverside Church. END

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CHAPTERS	SUBJECTS	SPEAKER	TITLE	PLACE	DATE
Alabama	Health of the American Executive	Richard B. Cooper	Asst. V. P., Dir. of Medical Relations, American Mutual Liability Ins. Co.	Tutwiler Hotel	11
Baltimore	Bring Government Back Home	Dr. Harley L. Lutz	Tax Consultant, The National Association of Manufacturers	Stafford Hotel	4
	An Organized Statistical Program			To Be Announced	19
Binghamton	A Company Wide Management Improvement Program	John B. Joynt	Mgr., Admin. Engr. Dept., American Enka Corp.	Hotel Arlington	19
Bridgeport	Ladies' Night—Modern Techniques in Household Management	Dr. Lillian M. Gilbreth	Pres., Gilbreth, Inc.	Algonquin Club	18
Cincinnati	Human Relations Training—Help or Hindrance	Dr. Kenneth Vaughn	Consulting & Industrial Psychologist, Rohrer, Hibler and Repogle	Hotel Alms, Marie Antoinette Room	6
Cleveland	Does Your Production Control Roll with the Punches	J. Lawrence	V. P., Production & Engr., Joy Manufacturing Co.	Hotel Allerton	10
Columbus	Supervisory Development			Hotel Fort Hayes	20
Dayton	International Association Among Management Groups	Kenneth Mason and Richard Locker, Chairmen			25
Fox Valley	Highlights on Building a Self-Loader Freighter—Plant Visitation	Robert King	Manitowoc Shipbuilding	"Detroit Edison" at Manitowoc Shipbuilding, Inc.	13
Georgia	Management Problems & Their Solutions—Panel Discussion	Victor P. Tabaka Charles Dudley Harry L. Baker	Victor P. Tabaka & Associates Dir., Associated Industries of Ga. Pres., Ga. Tech. Research Inst., and Asst. Dir., Ga. Tech. Engr. Exp. Station	Georgian Terrace Hotel	20
	Consultants as an Aid to Solving Problems of Management	Victor P. Tabaka	Victor P. Tabaka & Associates	Wilby Rm., Price Gilbert Library, Ga. Tech.	27
Greensboro	Plant Visitation			Pomona Terra Cotta Co., Pomona, N. C.	13
	Annual Time Study Conference			Hotel Robert E. Lee, Winston Salem, N. C.	20-21
Greenville	Employee Training	John E. McCarthy	Dir. of Training, Gimbrell Brothers	Greenville Hotel	12
Hudson Valley	Collective Bargaining and the Industrial Engineer	Dr. William Gomberg	Dir., Management Engineering Dept., International Ladies Garment Workers Union	Hendrick Hudson Hotel, Troy, N. Y.	4
Indianapolis	Here's How in Negotiating Union Contracts	C. F. Mugridge	Management Consultant	Marott Hotel	13
Kansas City	Financial Planning & Control	To Be Announced		Town House	18
Knoxville	There Are Motivation Techniques Too	Eugene J. Benge	Pres., Benge Associates	Holston Hills Country Club	11
	Plant Visitation			Southern Extract Co.	20
Lancaster	A Management Evaluation of Modern Accounting Methods	Dr. I. Wayne Keller	Controller, Armstrong Cork Co.	Hotel Brunswick	18
Lehigh Valley	Manpower Development	H. D. Moore	Regional Dir., General Electric Apparatus Div.		11
Madison	Medical Night—Panel and Group Discussion				5
Milwaukee	Where Will Tomorrow's Cost Reduction Come From	F. V. Gardner	F. V. Gardner & Associates	E. S. M. Building	13

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Nashville	Executive Development	W. A. Egerton	American Enka Corp.		13
	Some Everyday Applications of Statistics	Dillard Jacobs	Vanderbilt University		17
New Haven	Industrial Engineering Round Table				12
	Industrial Relations Round Table—Methods of In-Plant Communications			Bd. Rm., New Haven Chamber of Commerce	19
	Are Incentives a Barrier to Quality Control	Wayne M. Biklen	Quality Control Mgr., Am. Safety Razor Co.	Tiernan's Homestead, West Haven, Conn.	25
New York	Linear Programming	G. H. Symonds	Exec. Sec., Manufacturing Technical Comm., Esso Standard Oil Co.	Hotel Shelton	20
New Orleans	Food Store Management: From Corner Grocery to Super Mart	Dr. H. Gordon Hayes	Prof. of Economics, Tulane University	Roosevelt Hotel	11
Northeastern Pa.	Mid-Season Chapter Session				10
Philadelphia	Do Wage Incentives Really Reduce Costs	Robert H. Roy	Dean, School of Engineering, John Hopkins University	Poor Richard Club	4
	Analysis of Repair Costs, Repair vs. Scrap			Atlantic Refining Co.	11
	Twice Delay Photo Studies and Other 1954 Time Study Innovations			Atlantic Refining Co.	25
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Portland	Annual Business Meeting & Installation of Officers				26
Providence	Training and Development in Management	Frank Armitage		Providence Engineering Society	6
Raritan Valley	Plant Manager's Conference and Dinner Meeting—"Automation at the Ford Motor Company"	Carroll M. Boyce	Associate Editor, Factory Management and Maintenance	Rutgers University Commons	19
		Otto Krienke	Minneapolis Honeywell Regulator Co.		
		Malcolm Forbes	Editor & Publisher, Forbes Magazine		
		H. E. Taylor	Mgr., Communication Products Div., Allen B. Dumont Labs., Inc.		
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Richmond	New Methods and the Operator	Allen H. Mogensen	Work Simplification Conferences	John Marshall Hotel	25
Sacramento	The Role of Personnel Administration in Management	E. H. Hamstra	Resident Mgr., McMurray, Hamstra & Co.		11
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Wilmington	Practical Business Applications of Large Computers	Dr. Herbert F. Mitchell	Dir., UNIVAC Applications, Remington Rand, Inc.		12
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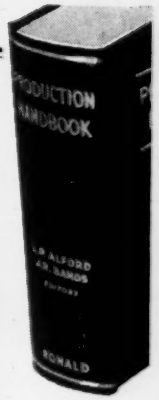

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